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KENTUCKY FORESTS

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CURRENT SERIAL RECORDS



Pennyroyal Unit

#6

FOREWORD

More than a decade has elapsed since the last comprehensive inventory of Kentucky's woodlands. Timber cutting, tree growth, and shifts in land use since then have led to several important changes in the timber resource. The demand for forest products has also changed. Recent emphasis on rural area development has made the necessity for fresh statistics even more pressing. Local communities and forest-based industries are finding a greater need for up-to-date data as they plan for future economic development. So, there is an urgent need for new information.

To meet these needs, the Division of Forestry of the Kentucky Department of Natural Resources and the U.S. Forest Service planned and conducted a new inventory of Kentucky forests. The field work was completed in 1964.

The McSweeney-McNary Forest Research Act of 1928 authorizes the Forest Service to complete a statewide forest inventory of Kentucky at approximate 10-year intervals. This is part of the nationwide program of maintaining a current account of our timber resources. The State of Kentucky appropriated \$120,000 for the current survey. This contribution, supplementing the Federal funds available for a regular survey, made it possible to intensify the inventory. As a result, we can provide the kind of detailed information needed for making long-range plans to meet future demands and in addition help local communities and forest-based industries make more efficient use of the forest resource.

Clarence D. Chase, Leader of the Survey Project at the Lake States Forest Experiment Station, directed the inventory. Field survey units of the Kentucky Division of Forestry and the Lake States Station collected the basic inventory data. The Lake States Station computed and tabulated the final statistics and the Central States Forest Experiment Station analyzed and reported the results.

Other organizations made important contributions to the new inventory. Personnel of the Eastern Region of the U.S. Forest Service inventoried and provided statistics for the Cumberland National Forest. The Northeastern Forest Experiment Station assisted with the computation of National Forest data. The Tennessee Valley Authority provided men and equipment to assist in surveying areas of their interest. The Soil Conservation Service and the Agricultural Stabilization and Conservation Service provided the field crews with office space and up-to-date aerial photographs. The Kentucky Department of Highways took and provided aerial photographs for parts of eastern Kentucky where no recent photographs were available. The University of Kentucky and Kentucky Department of Commerce took an active part in planning and gave valuable assistance with problems that evolved during the course of the inventory. Our thanks go to all these organizations and others who contributed.

For sampling and reporting purposes, the State was divided into seven survey units (frontispiece). This report covers the Pennyroyal Unit. Additional information regarding the survey can be obtained from either the Division of Forestry, Kentucky Department of Natural Resources, or the Central States Forest Experiment Station.

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KENTUCKY FORESTS

Pennyroyal Unit

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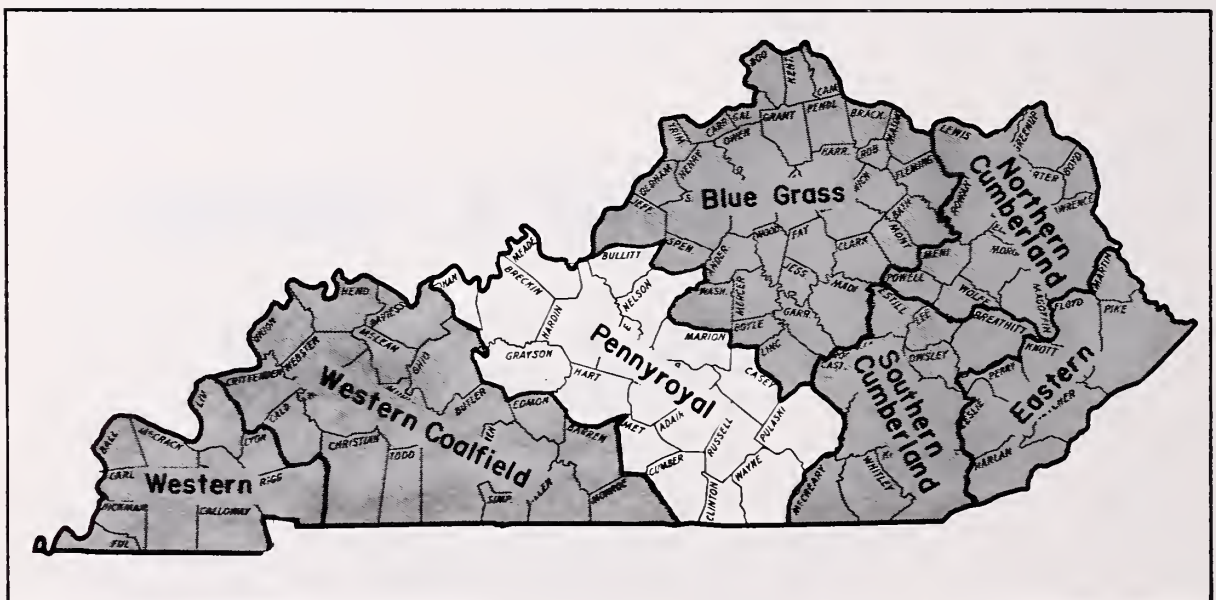
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Location of the Pennyroyal Unit in Kentucky.

THE TIMBER RESOURCE HAS CHANGED

The Pennyroyal Unit is a 20-county region of rolling hills in central Kentucky. Most of the area is well drained, with numerous depressions and caverns occurring where soft limestone bedrock has dissolved away (fig. 1). Soils generally are drier here than in most other parts of the State. Because dry soil and hilly topography are not conducive to a highly productive agriculture, it is not surprising that almost half the land area of the region is in forest. The Pennyroyal is more heavily forested than the Blue Grass country to the north and those regions further west, but it is much less so than the rugged hill country to the east.



FIGURE 1.—Wooded sink holes such as this are a common occurrence in the Pennyroyal Unit.

There are 2.2 million acres of forest in the region and only about 23,000 acres or 1 percent of it is noncommercial. Most of the noncommercial forest is classified unproductive, i.e., too poor for timber production. The remainder is woodland in State and National parks which has been reserved from cutting.

Commercial forest area has increased about 3 percent from 2,112 to 2,167 thousand acres since 1949 with gains occurring in most of the 20 counties (fig. 2). Much of the increase in forest area was a result of abandoned submarginal fields and pastures becoming restocked with tree cover. This new forest is in a brushy stage of development and has little or no merchantable timber volume. A noticeable loss in forest area occurred in Grayson County where two new reservoirs (Nolin and Rough River) have inundated many acres that were woodland in 1949.

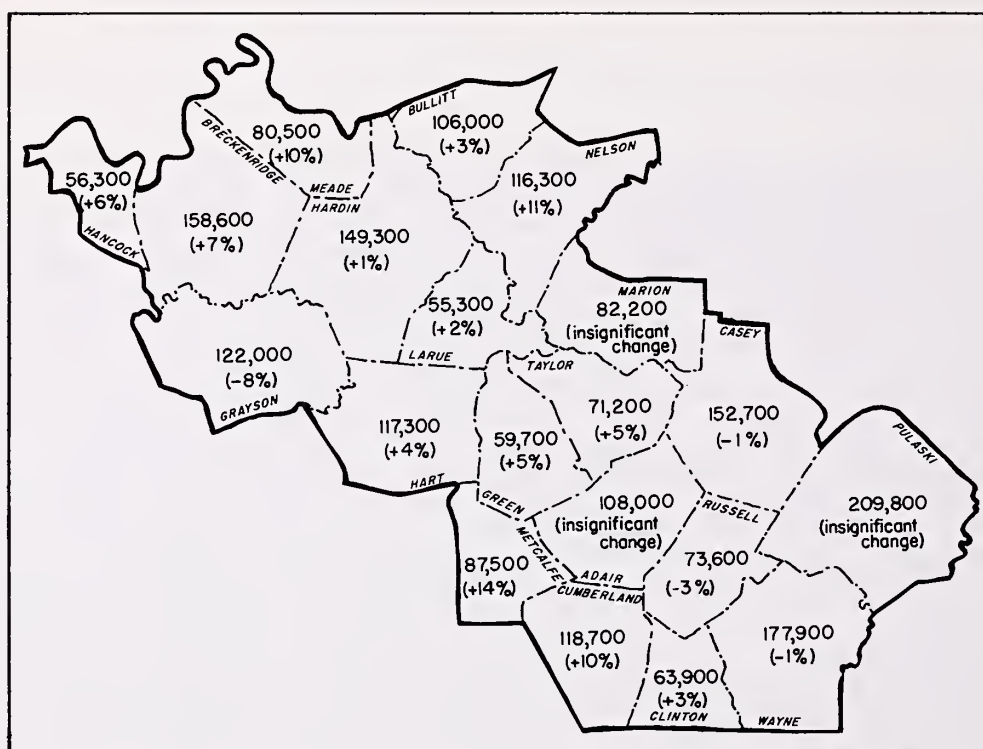


FIGURE 2.—Acreage of commercial forest land by county, 1963, and percentage change since 1949.

The pattern of forest-land ownership has not changed significantly since the time of the last survey. About 94 percent of the commercial forest is privately owned and most of the remainder is on Federal land in Fort Knox, the Cumberland National Forest, and holdings of the Corps of Engineers.

Hardwoods predominate in most stands with more than three-fourths of the commercial forest either in the oak-hickory or central mixed hardwood types. Pine stands have increased but they still represent less than 3 percent of the woodland. Almost half of the region's pine forest occurs in Pulaski and Wayne Counties at the southern extremity of Kentucky's pine belt. More than one-third of the State's redcedar-hardwood forests, which are commonly associated with dry sites, are found in this region.

Even though forest area increased, there is less merchantable timber volume now than in 1949. This means that the small amount of growing stock added to the inventory by land shifting into forest plus the natural growth occurring on all stands has not been enough to offset the volume losses from timber harvests, forest land clearing, and mortality. Volume per commercial forest acre averages about 569 cubic feet of growing stock and 1,929 board feet of sawtimber. These averages are 58 cubic feet and 116 board feet less than in 1949.¹

Decreases in volume were recorded for nearly all sizes of timber (fig. 3). The most important declines took place in trees over 17 inches d.b.h. — the size preferred by most local sawmills, stave mills, and other primary wood-using plants. In 1949 almost 40 percent of the total volume of sawtimber was in trees over 17 inches d.b.h. Now, less than 30 percent is in these sizes. But there is a large base of small, sound growing stock in the region's forest and this volume is currently growing at a much faster rate than it is being cut. Large numbers of poletimber trees are reaching sawtimber size each year. As these trees mature during the next few decades, the volume of large, high-quality saw logs should increase.

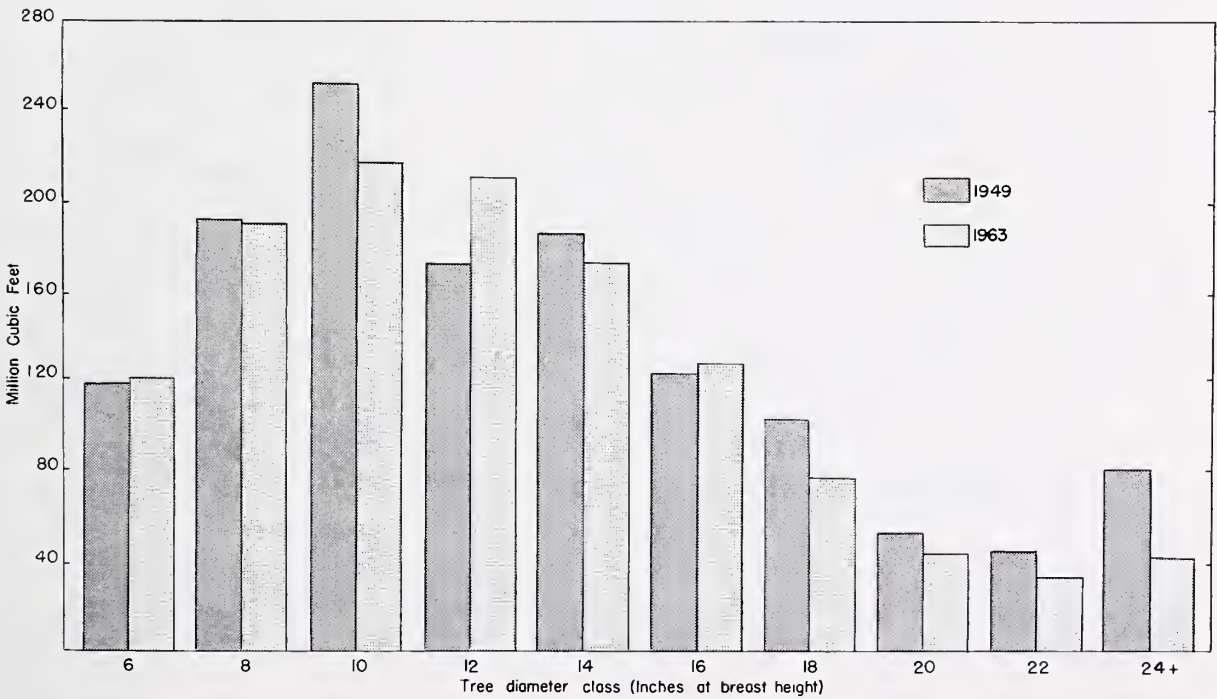


FIGURE 3.—Change in volume of growing stock by diameter class, 1949-1963.

¹ The 1949 estimates of growing-stock volume are not directly comparable with those of 1963 because they did not include merchantable material in the upper-stem portion of hardwood sawtimber-size trees. The 1949 data had to be adjusted to permit comparisons.

There have also been some significant changes in the species composition of Pennyroyal forests. The oaks still account for more than 40 percent of the total growing stock, but white oaks have replaced the red oaks as the leading species group (fig. 4). Heavy cutting has led to sharp reductions in the volume of red oak and beech sawtimber. On the other hand, the volumes of some other important timber species such as white oak, yellow-poplar, and hickory made impressive gains (fig. 5).

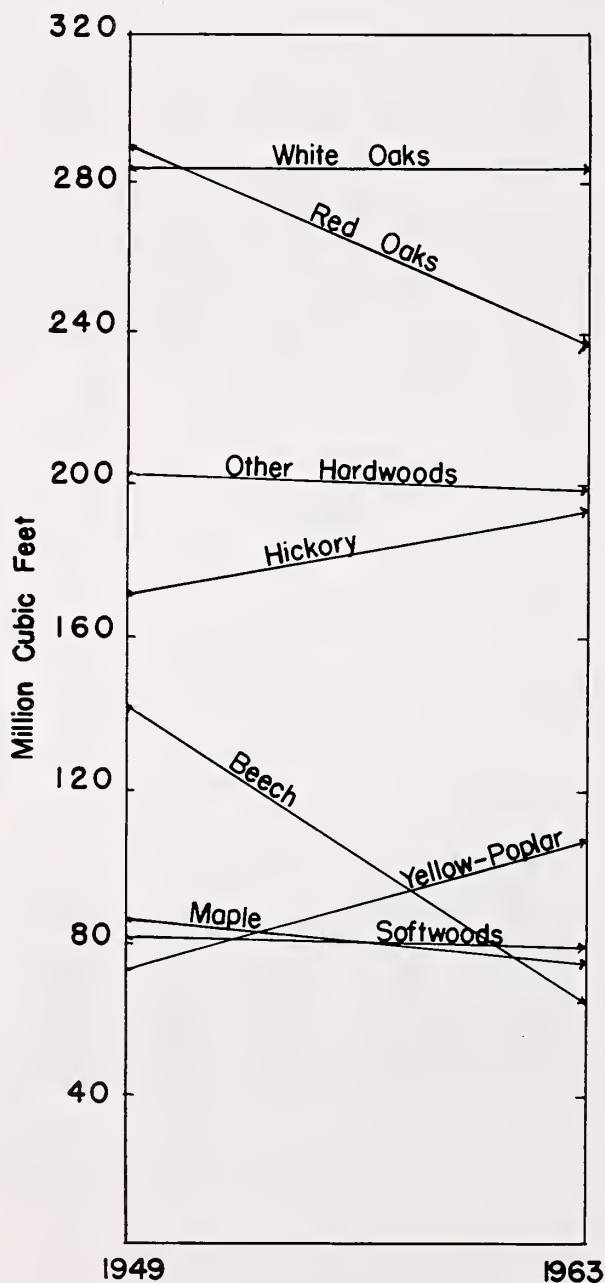


FIGURE 4.—Change in growing-stock volume by species groups, 1949-1963.

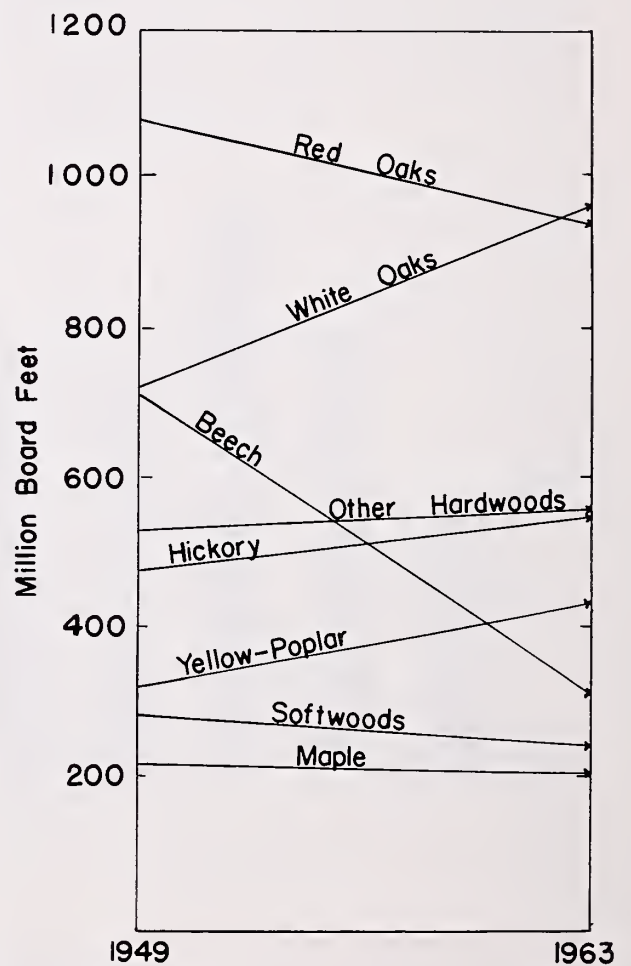


FIGURE 5.—Change in sawtimber volume by species groups, 1949-1963.

TIMBER INDUSTRIES AND DRAIN

More than 29 million cubic feet of growing stock were cut from the Pennyroyal Unit in 1962. This was nearly one-fourth of the total cut in Kentucky that year. Most of the harvest went to local wood-using plants.

There are more than 180 primary wood-using firms in the region and practically all of them are lumber-producing sawmills (fig. 6). Only a few sawmills produce more than a million board feet of lumber per year. In 1962, regional lumber production was about 90 million board feet.

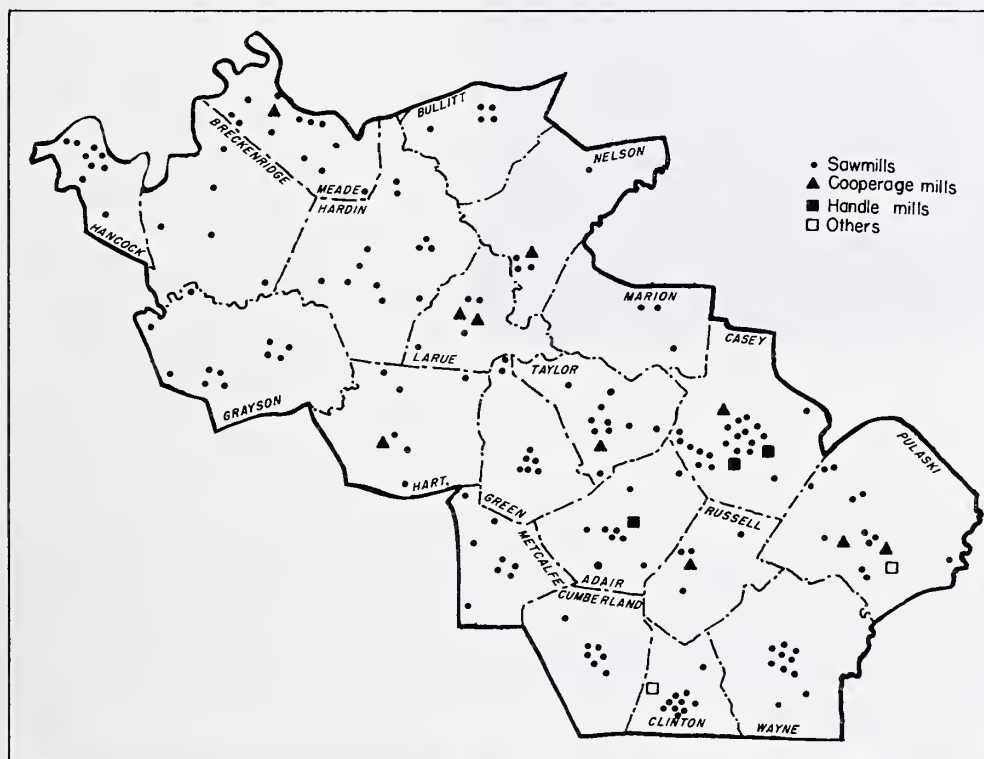


FIGURE 6.—Location of primary wood-using industries, 1963.

Included among the other primary firms are 10 stave mills and 3 handle plants. The log consumption of these mills totals less than 10 million board feet per year, but they use high-quality timber of preferred species such as white oak and ash.

The region also has two large charcoal operations at Burnside and Albany producing bulk charcoal and briquettes. Charcoal production has increased rapidly in recent years and the Pennyroyal is now one of the greatest charcoal-producing regions in the Nation (fig. 7).

A small amount of pine pulpwood is harvested from Pulaski and Wayne Counties each year and shipped to mills outside the State. But the pulpwood resource remains virtually untapped and the cut of pulpwood could be increased severalfold.



FIGURE 7.—This large stack of low-grade hardwood is on its way to the charcoal kiln.

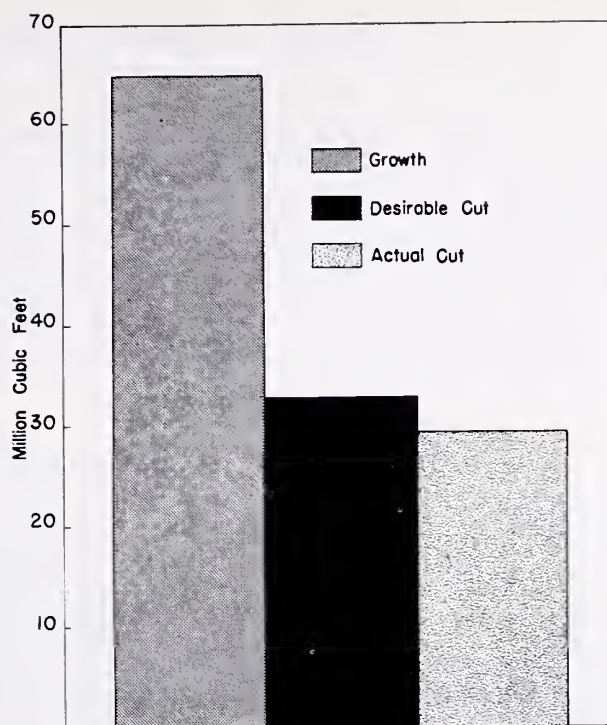
Almost three-fourths of the timber cut from the region in 1962 came from trees of sawtimber size. The harvest of sawtimber amounted to 133 million board feet, half of it coming from oak species. Beech, yellow-poplar, and hickory accounted for another third of the sawtimber cut. More than one-third of the beech sawtimber harvested from Kentucky in 1962 came from this region.

About 8 million cubic feet of poletimber-size timber were cut and used for charcoal, posts, fuelwood, pulpwood, and other products for which log size is not important. The harvest of poletimber volume was greater in the Pennyroyal than in any other survey unit of the State.

THE CURRENT BALANCE BETWEEN GROWTH AND CUT

The net annual growth of growing stock in the Pennyroyal Unit is 65 million cubic feet or 5.3 percent of the inventory before allowances are made for cutting (fig. 8). Sawtimber volume is growing at a rate of 306 million board feet or 7.3 percent per year. Growth per commercial forest acre averages 30 cubic feet of growing stock and 141 board feet of sawtimber.

FIGURE 8. — Growth, desirable cut, and actual cut of growing stock, 1963.



Volume-growth rates are about average for the State, but they are still well below the productive potential of the region's forests. Practically all of the commercial woodland is capable of producing more than 50 cubic feet of growing stock per acre per year (potential expressed in terms of mean annual growth at culmination of increment in fully stocked stands of desirable trees) and more than half the forest could produce more than 85 cubic feet per acre annually. Productivity of the region's forests could be increased significantly if stocking were improved. Only one-third of the region's forest is well stocked with merchantable or potentially merchantable trees and only 16 percent is in a highly productive condition, i.e., well stocked with desirable trees or expected to attain such stocking in the near future.

Even though timber growth is lower than it might be, it still exceeds the cut. A comparison of current growth (1963) and cutting (1962) data indicates that growing-stock volume is increasing about 3 percent and sawtimber volume about 4 percent annually. Most of the growth is on small trees while most of the cut is from larger, higher quality stock. The ratio of volume growth to volume cut for poletimber is about 5 to 1, but the growth-cut ratio for saw log material is about half as large. With the notable exceptions of the select red oaks and beech, most timber species are growing at a faster rate than they are being cut.

MORE TIMBER CAN BE HARVESTED

We have estimated a desirable cut of 33 million cubic feet of growing stock for the Pennyroyal Unit. This is the volume that should be removed annually during the next decade in harvest cuts and commercial thinnings. The aim of the desirable cut is to improve timber productivity with the long-range goal of establishing a regulated forest producing a sustained yield of timber. Desirable cut provides a silvicultural standard which can be compared with current actual cutting to show where shortages and surpluses exist in the timber supply.

In the Pennyroyal, the desirable cut of all growing stock exceeds the actual cut (that made in 1962) by more than 3 million cubic feet (fig. 8). But the relation of desirable cut to actual cut is not the same for all sizes and species of timber. An additional 4 million cubic feet, or half again as much poletimber volume, could be harvested each year if markets for this small timber were available. However, the cut of sawtimber volume exceeds the desirable cut by 16 million board feet and the amount of overcutting is greatest for large, high-quality logs of preferred species (fig. 9). Comparisons of desirable cut with actual cut indicate the harvest of sawtimber can be increased for many important species such as white oak and hickory. But it would be good from a silvicultural standpoint to reduce the cut of some others, e.g., select red oak, yellow-poplar, beech, and walnut until the stocking of this timber improves (fig. 10).



FIGURE 9.—In 1962, the regional cut of sawtimber volume exceeded the recommended cut.

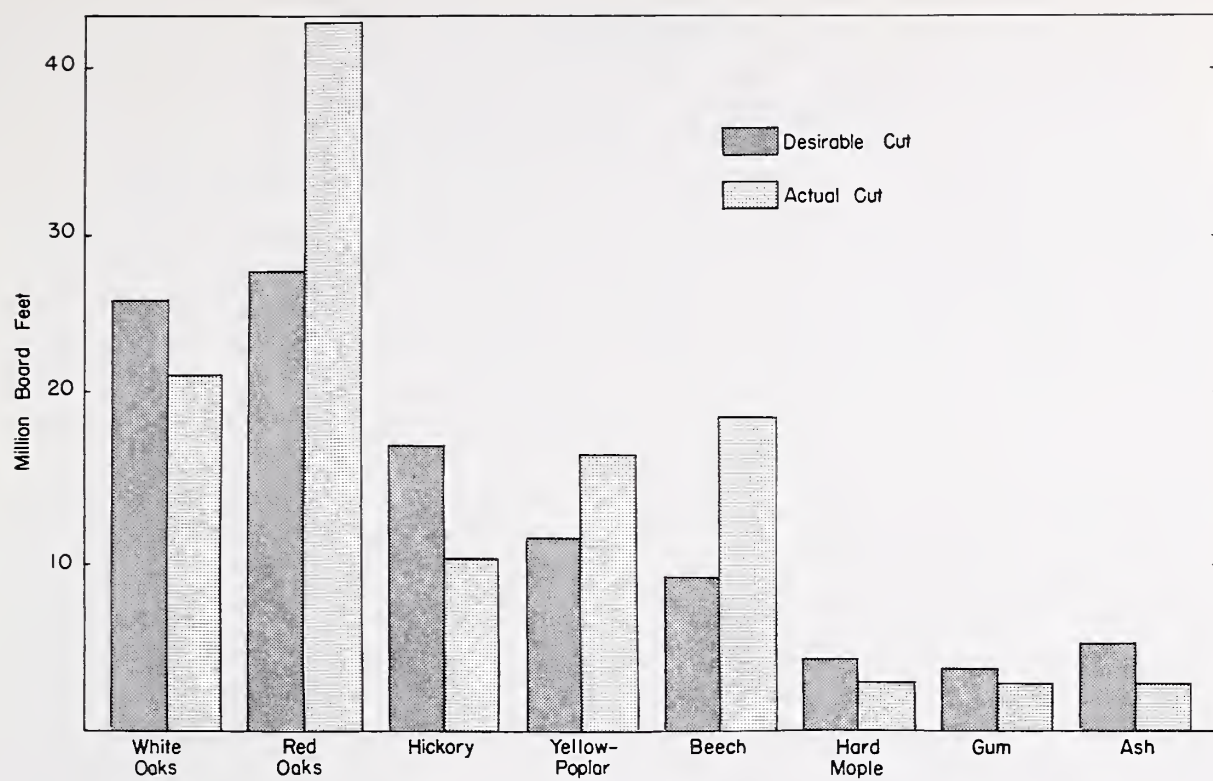


FIGURE 10.—Desirable cut and actual cut of sawtimber for selected species, 1963.

APPENDIX

Forest Survey Procedure

The resource statistics presented in this report were obtained from two sources: a timber-management-plan forest inventory of the Cumberland National Forest and a survey of all other forest land. Both were sampling surveys designed to yield reliable statistics for large areas. Both combined aerial photo interpretation and field work to minimize costs. Both employed electronic data-processing machines to reduce computing time and generate more usable statistics than could be done by hand methods.

To attain specific levels of statistical accuracy, triple sampling was used. A large number of points were first examined on aerial photographs to determine the proportions of forest and nonforest land. One-fourth of the forest points were stereoscopically classified as to forest type, stand size, stocking, and site. One-twelfth of these points were in turn examined on the ground. The ground classification provided a check on photo classification and a means of improving estimates of forest area.

At each forest ground-check point a plot was established. Trees were classified and measured as a basis for estimating timber volume, growth, mortality, and quality. Ownership was determined for each plot.

Timber-cut information was based on forest-industry production records for 1962, on stump counts at forest-inventory plots, cutting records from large owners, and utilization factors based on a logging-residue study.

Accuracy of Survey Estimate

Estimates of forest area and timber volume are subject to two kinds of errors: (1) nonsampling errors caused by mistakes in judgment, recording of measurements, or in calculations, and (2) sampling errors inherent in statistical work.

Nonsampling errors are not measurable and cannot be shown. They are avoided as much as possible through training of personnel, close supervision, and careful checking of all phases of the work.

Sampling errors are subject to the laws of chance and may be estimated by statistical methods. These errors are held to acceptable levels commensurate with the values involved and funds available by adjusting the survey design and the intensity of the sample. With a probability of two out of three (that is, relatively good) the accompanying table shows the accuracy of the data presented in this report. The sampling error of a survey is less for a large class or block than for a smaller class or other subdivision. Some of the resource statistics presented in this report have such large errors that it would be unwise to use them alone — but if they are combined with other figures the error may be reduced enough to warrant their use. Weak figures are shown to allow various combinations of data.

Commercial- forest land	Standard error of sampling	Growing-stock volumes	Standard error of sampling	Sawtimber volumes	Standard error of sampling
<i>Acres</i>	<i>Percent</i>	<i>Thousand cu. ft.</i>	<i>Percent</i>	<i>Thousand bd. ft.</i>	<i>Percent</i>
2,166,800	2.0	1,232,570	3.0	4,179,440	4.8
1,000,000	2.9	1,000,000	3.4	1,000,000	9.8
500,000	4.1	500,000	4.8	500,000	13.8
300,000	5.2	300,000	6.1	300,000	17.8
100,000	9.1	100,000	10.6	100,000	30.9
50,000	12.8	50,000	15.0	50,000	43.7
30,000	16.6	30,000	19.4	30,000	56.4
10,000	28.7	10,000	33.6	10,000	97.7
5,000	40.6	5,000	47.6		
3,000	52.4				

The occurrence of a (—) in the statistical tables of this report indicates one of two things:

- (1) No units were measured by the inventory.
- (2) The quantity of data measured was insignificant and did not warrant reporting.

Definition of Terms

Land and Forest Area

Gross area. — The entire area of land and water as determined by the Bureau of the Census.

Land area. — The area of dry land and land temporarily or partially covered by water such as marshes, swamps, and flood plains; streams, and sloughs less than $\frac{1}{8}$ mile wide; and lakes, reservoirs, and ponds less than 40 acres in area.

Forest land. — Land at least 10 percent stocked by forest trees of any size, or formerly having such tree cover and not currently developed for nonforest use. Does not include urban or thickly settled residential and resort areas, city parks, orchards, farmsteads, improved roads, or land developed and maintained for nonforest use by fencing, seeding, and so forth. The minimum area for classification of forest land or classes of forest land was 1 acre. Roadside, streamside, and shelterbelt strips of timber having a crown width of at least 120 feet qualified as forest land. Unimproved roads and trails, streams, and clearings in forest land were included as forest if less than 120 feet wide.

Commercial-forest land. — Forest land that is producing or capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation.

Noncommercial-forest land. — Unproductive forest land incapable of yielding crops of industrial wood because of adverse site conditions; and productive, public-forest land withdrawn from commercial timber use through statute or administrative regulation.

Ownership

National Forest. — Federal land that has been designated by Executive order or statute as National Forest, including purchase units; and other land under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III land.

Other public. — All publicly owned land other than National Forest.

Forest industry. — Land owned by companies or individuals operating wood-using plants.

Farmer and miscellaneous private. — All privately owned land except forest industry land.

Forest Types

Forest type. — A classification of forest land based upon species composition considering all live trees.

Southern pine. — Forests in which 50 percent or more of the stocking is shortleaf or other southern yellow pines, singly or in combination.

Redcedar-hardwoods. — Forests in which 50 percent or more of the stocking is hardwoods but in which redcedar makes up at least 25 percent of the stocking. Included also are those areas where redcedar makes up most of the stocking.

Oak-pine. — Forests in which 50 percent or more of the stocking is hardwoods (usually upland oaks) but in which southern pine makes up at least 25 percent of the stocking.

White oak. — Forests in which 50 percent or more of the stocking is white oak, except stands that classify as redcedar-hardwoods or oak-pine.

Oak-hickory. — Forests in which 50 percent or more of the stocking is upland oaks or hickories, singly or in combination, except stands that classify as oak-pine, redcedar-hardwoods, or white oak.

Central mixed hardwoods. — Forests in which 50 percent or more of the stocking is a combination of hardwood species, principally yellow-poplar, maple, beech, basswood, black walnut, elm, and northern red oak, except stands that classify as redcedar-hardwoods, oak-pine, oak-hickory, maple-beech, or elm-ash-cottonwood.

Maple-beech. — Forests in which 50 percent or more of the stocking is maple or beech, singly or in combination, except stands that classify as redcedar-hardwoods or oak-pine.

Elm-ash-cottonwood. — Forests in which 50 percent or more of the stocking is elm, ash, or cottonwood, singly or in combination except stands that classify as redcedar-hardwoods or oak-pine.

Stand-Size Classes

Stand-size class. — A classification of forest land based on the predominant size of timber present—sawtimber, poletimber, or seedlings and saplings.

Sawtimber stands. — Stands at least 10 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands. — Stands at least 10 percent stocked with growing-stock trees, and with half or more of this stocking in sawtimber and/or poletimber trees and with poletimber stocking exceeding that of sawtimber.

Seedling-sapling stands. — Stands at least 10 percent stocked with growing-stock trees and with seedlings and/or saplings comprising more than half of this stocking.

Nonstocked areas. — Commercial-forest land less than 10 percent stocked with growing-stock trees.

Stocking Classes

Stocking class. — A classification of commercial-forest land based on the percent of area occupied by growing-stock trees. *Growing-stock trees* include all live trees except culls.

Well stocked. — Stands that are 70 percent or more stocked with growing-stock trees.

Medium stocked. — Stands that are 40 to 69 percent stocked with growing-stock trees.

Poorly stocked. — Stands that are from 10 to 39 percent stocked with growing-stock trees.

Nonstocked. — Areas of commercial-forest land not qualifying as sawtimber, poletimber, or seedling and sapling stands. These areas may contain some volume but less than 10 percent of the growing space is effectively utilized by growing stock.

Area-Condition Classes

A classification of commercial-forest land based upon stocking by desirable growing-stock trees and conditions affecting current and prospective timber growth. *Desirable growing-stock trees* are those that have no serious defects in quality limiting present or prospective use. They have relatively high vigor and contain no pathogens that may result in death or serious deterioration before rotation age. These are the trees that would be favored in silvicultural operations.

Desirable. — Areas 70 percent or more stocked with desirable trees.

Moderate and favorable. — Areas 40 to 70 percent stocked with desirable trees and with 30 percent or less of the area having other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

Moderate and unfavorable. — Areas 40 to 70 percent stocked with desirable trees and with more than 30 percent of the area having other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

Poor but favorable. — Areas less than 40 percent stocked with desirable trees and with 30 percent or less of the area having other trees and/or inhibiting vegetation or surface conditions that prevent occupancy by desirable trees.

Poor and unfavorable. — Areas less than 40 percent stocked with desirable trees and with more than 30 percent of the area having other trees and/or inhibiting vegetation or surface conditions that prevent occupancy by desirable species.

Volume Classification

Growing-stock volume. — Cubic-foot volume of sound wood in the bole of sawtimber and poletimber trees from the stump to a minimum 4-inch-top diameter outside bark or to the point where the central stem breaks into limbs.

Sawtimber volume. — Net volume of the saw-log portion of live sawtimber trees in board feet, International $\frac{1}{4}$ -inch rule. The saw-log portion extends from stump to a minimum top diameter outside bark of 6 inches for softwoods and 8 inches for hardwoods or to the point where defects reduce saw-log quality below Standard Log Grade 3 or Tie-and-Timber Grade.

Tree-Size Classes

Sawtimber trees. — Live trees of commercial species containing at least an 8-foot saw log. Softwoods must be at least 9 inches and hardwoods at least 11 inches d.b.h. outside bark.

Poletimber trees. — Live trees of commercial species at least 5 inches d.b.h. but smaller than sawtimber size, and of good form and vigor.

Saplings. — Live trees of commercial species 1 to 5 inches d.b.h. and of good form and vigor.

Seedlings. — Live trees of commercial species less than 1 inch d.b.h. that are expected to survive.

Growth

Net annual growth. — The annual change in volume of sound wood in live sawtimber and poletimber trees and the total volume of trees entering these classes through ingrowth less volume losses resulting from natural causes.

Growing-stock growth. — Net annual growth of poletimber and sawtimber trees in cubic feet.

Sawtimber growth. — Net annual growth of sawtimber trees in board feet, International $\frac{1}{4}$ -inch rule.

Timber Cut

Timber cut from growing stock. — The net cubic-foot volume of sound wood in live sawtimber and poletimber trees cut for forest products during a specified year, including both roundwood products and logging residues.

Timber cut from sawtimber. — The net board-foot volume of live sawtimber trees cut for forest products during a specified year, including both roundwood products and logging residues.

Desirable cut (formerly called allowable cut). — The net volume of live sawtimber and poletimber trees that can be cut annually during the next 10 years in commercial-logging operations while maintaining or increasing growing stock and while effecting a reasonably even distribution of age classes below the rotation age selected for each type. It includes harvest and improvement cuts yielding 3 cords or more per acre, and one-tenth of the entire net volume of stands 10 or more years beyond the rotation age. Desirable cut includes all timber of merchantable size that should be cut from commercial-forest land in order to salvage, rejuvenate, or improve the stands and increase the growth without regard to restraints of ownership, inaccessibility, or the profit motive. Some of this timber may not be available for sale, too hard to get at or too scattered, or of currently unwanted species or quality. More forest products may be obtained by reducing the "forest capital."

*Rotation ages for saw-log trees in extensively managed stands
by forest-type and site-index classes*

(In years)

Forest type	Site index (50-year height in feet)*						
	40	50	60	70	80	90	100+
Southern pine	120	110	90	--	--	--	--
Redcedar-hardwoods	120	110	90	--	--	--	--
Oak-pine	120	110	90	--	--	--	--
White oak	120	110	90	80	75	70	--
Oak-hickory	120	110	90	80	75	70	--
Central mixed hardwoods	--	110	90	80	75	70	60
Maple-beech	--	100	100	100	100	--	--
Oak-gum-cypress	--	--	--	80	75	70	60
Elm-ash-cottonwood†	--	--	--	80	70	60	60

* Except in the case of cottonwood for which it is total height at 25 years.

† The rotation for cottonwood is half of the age shown.

Miscellaneous Definitions

Site class. — A classification of commercial-forest land based on potential yields in cubic feet per acre of mean annual growth at culmination of increment in fully stocked stands of desirable trees.

D.b.h. (Diameter at breast height). — Tree diameter in inches measured outside the bark at a point 4½ feet above the ground.

Diameter class. — Where data are presented in 2-inch diameter classes, they include diameters from 1.0 inches below to 0.9 inches above the stated midpoint; e.g., trees 5.0 inches to and including 6.9 inches, are included in the 6-inch class.

Principal Commercial Tree Species of Kentucky²

Softwood Species

Cypress (baldcypress)	<i>Taxodium distichum</i> (L.) Rich.
Hemlock (eastern)	<i>Tsuga canadensis</i> (L.) Carr.
Pine group includes —	
Shortleaf pine	<i>Pinus echinata</i> Mill.
Other yellow pines:	
Pitch pine	<i>P. rigida</i> Mill.
Virginia pine	<i>P. virginiana</i> Mill.
White pine (eastern)	<i>P. strobus</i> L.
Redcedar (eastern)	<i>Juniperus virginiana</i> L.

Hardwood Species

Ash	<i>Fraxinus</i> L. species
Basswood	<i>Tilia</i> L. species
Beech (American)	<i>Fagus grandifolia</i> Ehrh.
Birch (yellow)	<i>Betula alleghaniensis</i> Britton
Blackgum	<i>Nyssa</i> L. species
Black walnut	<i>Juglans nigra</i> L.
Cottonwood (eastern)	<i>Populus deltoides</i> Bartr.
Hickory	<i>Carya</i> Nutt. species
Maple (hard) includes —	
Black maple	<i>Acer nigrum</i> Michx. f.
Sugar maple	<i>A. saccharum</i> Marsh.
Maple (soft) includes —	
Boxelder	<i>A. negundo</i> L.
Red maple	<i>A. rubrum</i> var. <i>rubrum</i> L.
Silver maple	<i>A. saccharinum</i> L.
Oak group includes —	
Select red oaks:	
Cherrybark oak	<i>Quercus falcata</i> var. <i>pagodaefolia</i> Ell.
Northern red oak	<i>Q. rubra</i> L.
Shumard oak	<i>Q. shumardii</i> Buckl.
Other red oaks:	
Black oak	<i>Q. velutina</i> Lam.
Pin oak	<i>Q. palustris</i> Muenchh.
Scarlet oak	<i>Q. coccinea</i> Muenchh.
Shingle oak	<i>Q. imbricaria</i> Michx.
Southern red oak	<i>Q. falcata</i> Michx.
Water oak	<i>Q. nigra</i> L.
Willow oak	<i>Q. phellos</i> L.

² The common and scientific names are based on: Little, Elbert L., Jr. CHECK LIST OF NATIVE AND NATURALIZED TREES OF THE UNITED STATES (INCLUDING ALASKA). U.S. Dept. Agr. Handb. 41, 472 pp. 1953.

Select white oaks:

Bur oak	<i>Q. macrocarpa</i> Michx.
Chinkapin oak	<i>Q. muehlenbergii</i> Engelm.
Swamp chestnut oak	<i>Q. michauxii</i> Nutt.
Swamp white oak	<i>Q. bicolor</i> Willd.
White oak	<i>Q. alba</i> L.

Other white oaks:

Chestnut oak	<i>Q. prinus</i> L.
Overcup oak	<i>Q. lyrata</i> Walt.
Post oak	<i>Q. stellata</i> var. <i>stellata</i> Wangenh.

Sweetgum *Liquidambar styraciflua* L.

Yellow-poplar *Liriodendron tulipifera* L.

Other hardwoods includes —

Birch (river)	<i>Betula nigra</i> L.
Buckeye (Ohio)	<i>Aesculus glabra</i> Willd.
Buckeye (yellow)	<i>A. octandra</i> Marsh.
Butternut	<i>Juglans cinerea</i> L.
Cherry (black)	<i>Prunus serotina</i> Ehrh.
Coffeetree (Kentucky)	<i>Gymnocladus dioicus</i> (L.) K. Koch.
Cucumbertree	<i>Magnolia acuminata</i> L.
Dogwood (flowering)	<i>Cornus florida</i> L.
Elm	<i>Ulmus</i> L. species
Hackberry	<i>Celtis occidentalis</i> L.
Honeylocust	<i>Gleditsia triacanthos</i> L.
Locust (black)	<i>Robinia pseudoacacia</i> L.
Mulberry (red)	<i>Morus rubra</i> L.
Osage-orange	<i>Maclura pomifera</i> (Raf.) Schneid.
Persimmon (common)	<i>Diospyros virginiana</i> L.
Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees
Sycamore (American)	<i>Platanus occidentalis</i> L.
Willow (black)	<i>Salix nigra</i> Marsh.

Statistical Tables

The following tables present forest-resource data for the Pennyroyal Unit and each of its 20 counties. Tables 1-7 contain information on land and forest area; tables 8-12 information on numbers of trees and timber volume; and tables 13-18 information on growth, cut, and desirable cut. Data for individual counties are shown in tables 1, 4, 10, 14, and 18.

Table 1.--*Area of land and forest land by counties*
Pennyroyal Unit, Kentucky, 1963

County	Gross area*	Land area*	Forest land			Commercial forest as a percent of land area
			All forest	Non- commercial	Commercial	
	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>
Adair	251,500	251,500	108,800	800	108,000	42.9
Breckenridge	366,700	362,300	160,000	1,400	158,600	43.8
Bullitt	192,000	192,000	106,600	600	106,000	55.2
Casey	278,400	278,400	153,800	1,100	152,700	54.8
Clinton	131,800	122,200	64,400	500	63,900	52.3
Cumberland	200,300	196,500	119,800	1,100	118,700	60.4
Grayson	329,000	329,000	122,500	500	122,000	37.1
Green	180,500	180,500	60,200	500	59,700	33.1
Hancock	126,700	119,700	56,800	500	56,300	47.0
Hardin	394,900	394,200	150,300	1,000	149,300	37.9
Hart	272,000	272,000	122,900	5,600	117,300	43.1
Larue	166,400	166,400	55,700	400	55,300	33.2
Marion	219,500	219,500	82,800	600	82,200	37.4
Meade	206,100	197,100	81,000	500	80,500	40.8
Metcalfe	189,400	189,400	88,000	500	87,500	46.2
Nelson	279,700	279,700	117,200	900	116,300	41.6
Pulaski	432,000	403,200	211,200	1,400	209,800	52.0
Russell	180,500	154,900	76,300	2,700	73,600	47.5
Taylor	181,800	181,800	71,800	600	71,200	39.2
Wayne	309,800	281,600	179,300	1,400	177,900	63.2
Total	4,889,000	4,771,900	2,189,400	22,600	2,166,800	45.4

* Gross area and land area are from the Bureau of the Census, 1960.

Table 2.--*Area of commercial-forest land by ownership and stand-size class*
Pennyroyal Unit, Kentucky, 1963

(In acres)

Ownership class	All stands	Saw- timber	Pole- timber	Seedlings and saplings	Non- stocked
National forest	23,800	20,300	3,300	200	--
Other public	113,800	71,700	13,300	24,500	4,300
Forest industry	31,900	13,700	8,400	9,700	100
Farmer and miscellaneous private	1,997,300	858,800	524,900	607,400	6,200
All ownerships	2,166,800	964,500	549,900	641,800	10,600

Table 3. -- *Area of commercial-forest land by stocking and stand-size class*
Pennyroyal Unit, Kentucky, 1963

(In acres)

Stocking class (percent)	All stands	Saw- timber	Pole- timber	Seedlings and saplings	Non- stocked
70 or more	731,500	343,500	232,000	156,000	--
40-70	1,219,700	581,000	284,400	354,300	--
10-40	205,000	40,000	33,500	131,500	--
Less than 10	10,600	--	--	--	10,600
All classes	2,166,800	964,500	549,900	641,800	10,600

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county*
Pennyroyal Unit, Kentucky, 1963

(In acres)

ALL COUNTIES

Forest type	All stands	Saw- timber	Pole- timber	Seedlings and saplings	Non- stocked
Southern pine	58,200	29,900	19,600	8,700	--
Redcedar-hardwoods	190,300	20,000	51,900	114,200	4,200
Oak-pine	48,000	17,400	15,600	15,000	--
White oak	66,200	33,700	16,300	16,200	--
Oak-hickory	879,500	457,400	264,900	150,800	6,400
Central mixed hardwoods	783,400	325,100	154,800	303,500	--
Maple-beech	45,200	36,600	--	8,600	--
Elm-ash-cottonwood	96,000	44,400	26,800	24,800	--
All types	2,166,800	964,500	549,900	641,800	10,600

ADAIR COUNTY

Southern pine	2,200	600	1,600	--	--
Redcedar-hardwoods	8,900	600	1,900	6,200	200
Oak-pine	1,600	800	700	100	--
White oak	1,800	200	300	1,300	--
Oak-hickory	43,600	15,300	15,500	12,100	700
Central mixed hardwoods	42,800	12,700	9,100	21,000	--
Maple-beech	1,500	1,400	--	100	--
Elm-ash-cottonwood	5,600	2,000	1,700	1,900	--
All types	108,000	33,600	30,800	42,700	900

Table 4.-- *Area of commercial-forest land by forest type and stand-size class by county*
Pennyroyal Unit, Kentucky, 1963--Continued

(In acres)

BRECKENRIDGE COUNTY

Southern pine	1,500	1,000	200	300	--
Redcedar-hardwoods	14,800	1,300	4,200	9,000	300
Oak-pine	2,600	400	1,000	1,200	--
White oak	5,900	3,300	1,500	1,100	--
Oak-hickory	64,100	36,800	15,700	10,600	1,000
Central mixed hardwoods	58,800	26,900	10,300	21,600	--
Maple-beech	4,000	3,500	--	500	--
Elm-ash-cottonwood	6,900	3,400	2,000	1,500	--
All types	158,600	76,600	34,900	45,800	1,300

BULLITT COUNTY

Forest type	All stands	Saw-timber	Pole-timber	Seedlings and saplings	Non-stocked
Southern pine	2,400	1,000	900	500	--
Redcedar-hardwoods	7,300	1,200	1,500	4,500	100
Oak-pine	1,400	500	600	300	--
White oak	4,100	2,200	1,000	900	--
Oak-hickory	46,600	24,700	15,500	6,200	200
Central mixed hardwoods	36,700	16,300	8,600	11,800	--
Maple-beech	2,200	1,900	--	300	--
Elm-ash-cottonwood	5,300	2,800	1,600	900	--
All types	106,000	50,600	29,700	25,400	300

CASEY COUNTY

Southern pine	1,300	400	700	200	--
Redcedar-hardwoods	8,400	1,800	2,700	3,700	200
Oak-pine	2,100	500	1,000	600	--
White oak	6,200	3,500	1,700	1,000	--
Oak-hickory	69,300	38,300	21,700	8,800	500
Central mixed hardwoods	54,900	26,500	11,900	16,500	--
Maple-beech	3,500	2,700	--	800	--
Elm-ash-cottonwood	7,000	3,400	2,300	1,300	--
All types	152,700	77,100	42,000	32,900	700

CLINTON COUNTY

Southern pine	1,400	900	300	200	--
Redcedar-hardwoods	4,300	1,100	1,700	1,400	100
Oak-pine	900	300	300	300	--
White oak	1,800	1,100	400	300	--
Oak-hickory	28,000	16,000	8,400	3,600	--
Central mixed hardwoods	22,900	10,100	4,600	8,200	--
Maple-beech	1,700	1,100	--	600	--
Elm-ash-cottonwood	2,900	1,400	700	800	--
All types	63,900	32,000	16,400	15,400	100

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county
Pennyroyal Unit, Kentucky, 1963--Continued*

(In acres)

CUMBERLAND COUNTY

Southern pine	1,900	100	1,600	200	--
Redcedar-hardwoods	8,500	900	2,300	5,200	100
Oak-pine	3,000	800	1,000	1,200	--
White oak	3,200	1,200	1,000	1,000	--
Oak-hickory	49,800	24,000	15,400	10,100	300
Central mixed hardwoods	45,400	16,800	9,900	18,700	--
Maple-beech	2,600	2,300	--	300	--
Elm-ash-cottonwood	4,300	2,000	1,200	1,100	--
All types	118,700	48,100	32,400	37,800	400

GRAYSON COUNTY

Forest type	All stands	Saw-timber	Pole-timber	Seedlings and saplings	Non-stocked
Southern pine	2,700	1,400	1,000	300	--
Redcedar-hardwoods	13,900	800	2,700	10,100	300
Oak-pine	2,100	600	800	700	--
White oak	3,600	1,700	700	1,200	--
Oak-hickory	45,200	22,400	12,400	9,600	800
Central mixed hardwoods	46,900	18,100	7,400	21,400	--
Maple-beech	2,000	1,600	--	400	--
Elm-ash-cottonwood	5,600	2,200	1,700	1,700	--
All types	122,000	48,800	26,700	45,400	1,100

GREEN COUNTY

Southern pine	800	200	400	200	--
Redcedar-hardwoods	4,900	700	1,500	2,500	200
Oak-pine	900	300	200	400	--
White oak	2,000	1,300	400	300	--
Oak-hickory	24,100	13,500	6,800	3,800	--
Central mixed hardwoods	22,900	9,400	3,900	9,600	--
Maple-beech	1,500	1,100	--	400	--
Elm-ash-cottonwood	2,600	1,200	600	800	--
All types	59,700	27,700	13,800	18,000	200

HANCOCK COUNTY

Southern pine	700	100	500	100	--
Redcedar-hardwoods	3,900	500	1,000	2,300	100
Oak-pine	600	300	100	200	--
White oak	1,200	400	300	500	--
Oak-hickory	22,200	10,000	7,500	4,700	--
Central mixed hardwoods	22,500	9,100	3,900	9,500	--
Maple-beech	1,000	700	--	300	--
Elm-ash-cottonwood	4,200	2,300	900	1,000	--
All types	56,300	23,400	14,200	18,600	100

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county*
Pennyroyal Unit, Kentucky, 1963 -- Continued

(In acres)

HARDIN COUNTY

Southern pine	2,600	1,300	1,000	300	--
Redcedar-hardwoods	12,500	1,300	3,100	7,700	400
Oak-pine	2,800	1,000	700	1,100	--
White oak	4,300	1,900	1,300	1,100	--
Oak-hickory	60,300	31,200	18,700	10,000	400
Central mixed hardwoods	55,900	22,700	10,100	23,100	--
Maple-beech	3,200	2,600	--	600	--
Elm-ash-cottonwood	7,700	3,100	2,200	2,400	--
All types	149,300	65,100	37,100	46,300	800

HART COUNTY

Forest type	All stands	Saw-timber	Pole-timber	Seedlings and saplings	Non-stocked
Southern pine	1,200	600	400	200	--
Redcedar-hardwoods	9,400	1,100	2,100	6,000	200
Oak-pine	1,400	400	500	500	--
White oak	3,400	1,900	900	600	--
Oak-hickory	50,400	23,700	13,700	12,000	1,000
Central mixed hardwoods	42,900	18,500	7,800	16,600	--
Maple-beech	2,500	2,100	--	400	--
Elm-ash-cottonwood	6,100	3,200	1,800	1,100	--
All types	117,300	51,500	27,200	37,400	1,200

LARUE COUNTY

Southern pine	900	500	200	200	--
Redcedar-hardwoods	4,100	600	1,200	2,100	200
Oak-pine	800	200	300	300	--
White oak	1,900	1,200	500	200	--
Oak-hickory	23,700	14,000	7,000	2,600	100
Central mixed hardwoods	20,300	9,400	3,500	7,400	--
Maple-beech	1,300	1,000	--	300	--
Elm-ash-cottonwood	2,300	1,200	600	500	--
All types	55,300	28,100	13,300	13,600	300

MARION COUNTY

Southern pine	1,100	300	700	100	--
Redcedar-hardwoods	7,500	500	2,600	4,200	200
Oak-pine	1,300	400	400	500	--
White oak	2,400	600	500	1,300	--
Oak-hickory	33,600	15,100	11,800	6,500	200
Central mixed hardwoods	31,400	12,000	6,800	12,600	--
Maple-beech	1,100	1,000	--	100	--
Elm-ash-cottonwood	3,800	1,400	1,200	1,200	--
All types	82,200	31,300	24,000	26,500	400

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county
Pennyroyal Unit, Kentucky, 1963 -- Continued*

(In acres)

MEADE COUNTY

Southern pine	2,900	2,200	500	200	--
Redcedar-hardwoods	7,800	500	2,200	4,900	200
Oak-pine	1,600	400	800	400	--
White oak	2,400	1,000	600	800	--
Oak-hickory	32,700	16,200	11,000	5,500	--
Central mixed hardwoods	27,900	11,200	6,300	10,400	--
Maple-beech	1,200	1,100	--	100	--
Elm-ash-cottonwood	4,000	1,800	900	1,300	--
All types	80,500	34,400	22,300	23,600	200

METCALFE COUNTY

Forest type	All stands	Saw-timber	Pole-timber	Seedlings and saplings	Non-stocked
Southern pine	2,100	800	1,000	300	--
Redcedar-hardwoods	6,500	1,000	1,400	3,900	200
Oak-pine	1,300	600	300	400	--
White oak	3,000	1,800	800	400	--
Oak-hickory	37,500	20,800	11,900	4,800	--
Central mixed hardwoods	31,100	13,500	7,100	10,500	--
Maple-beech	1,800	1,200	--	600	--
Elm-ash-cottonwood	4,200	1,900	1,200	1,100	--
All types	87,500	41,600	23,700	22,000	200

NELSON COUNTY

Southern pine	4,600	3,000	800	800	--
Redcedar-hardwoods	13,500	1,100	5,800	6,300	300
Oak-pine	2,000	800	400	800	--
White oak	3,400	2,000	800	600	--
Oak-hickory	41,700	23,600	11,300	6,800	--
Central mixed hardwoods	44,600	18,000	8,500	18,100	--
Maple-beech	2,500	2,000	--	500	--
Elm-ash-cottonwood	4,000	1,800	900	1,300	--
All types	116,300	52,300	28,500	35,200	300

PULASKI COUNTY

Southern pine	14,500	8,500	4,100	1,900	--
Redcedar-hardwoods	19,100	1,800	4,400	12,600	300
Oak-pine	13,000	6,900	4,400	1,700	--
White oak	6,800	4,000	1,800	1,000	--
Oak-hickory	80,600	49,300	19,800	10,900	600
Central mixed hardwoods	64,100	30,400	10,900	22,800	--
Maple-beech	4,900	4,200	--	700	--
Elm-ash-cottonwood	6,800	3,400	1,900	1,500	--
All types	209,800	108,500	47,300	53,100	900

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county
Pennyroyal Unit, Kentucky, 1963 -- Continued*

(In acres)

RUSSELL COUNTY

Southern pine	900	100	700	100	--
Redcedar-hardwoods	5,200	500	1,500	3,000	200
Oak-pine	1,300	500	400	400	--
White oak	2,100	800	400	900	--
Oak-hickory	32,700	13,400	12,200	6,800	300
Central mixed hardwoods	26,600	8,500	7,000	11,100	--
Maple-beech	800	600	--	200	--
Elm-ash-cottonwood	4,000	1,700	1,200	1,100	--
All types	73,600	26,100	23,400	23,600	500

TAYLOR COUNTY

Forest type	All stands	Saw-timber	Pole-timber	Seedlings and saplings	Non-stocked
Southern pine	900	300	400	200	--
Redcedar-hardwoods	5,300	1,100	1,400	2,600	200
Oak-pine	1,100	500	300	300	--
White oak	2,400	1,400	500	500	--
Oak-hickory	30,100	17,200	8,700	4,100	100
Central mixed hardwoods	26,700	11,900	5,100	9,700	--
Maple-beech	1,800	1,200	--	600	--
Elm-ash-cottonwood	2,900	1,400	700	800	--
All types	71,200	35,000	17,100	18,800	300

WAYNE COUNTY

Southern-pine	11,600	6,600	2,600	2,400	--
Redcedar-hardwoods	24,500	1,600	6,700	16,000	200
Oak-pine	6,200	1,200	1,400	3,600	--
White oak	4,300	2,200	900	1,200	--
Oak-hickory	63,300	31,900	19,900	11,300	200
Central mixed hardwoods	58,100	23,100	12,100	22,900	--
Maple-beech	4,100	3,300	--	800	--
Elm-ash-cottonwood	5,800	2,800	1,500	1,500	--
All types	177,900	72,700	45,100	59,700	400

Table 5.--*Area of commercial-forest land by forest type and site class*
Pennyroyal Unit, Kentucky, 1963

(In acres)

Forest type	All sites	Site class (potential growth per acre per year in cubic feet)			
		120 or more	85 to 120	50 to 85	Less than 50
Southern pine	58,200	200	18,100	39,900	--
Redcedar-hardwoods	190,300	--	161,100	29,200	--
Oak-pine	48,000	700	24,400	13,200	9,700
White oak	66,200	100	52,500	13,600	--
Oak-hickory	879,500	1,400	523,800	341,600	12,700
Central mixed hardwoods	783,400	200	314,200	401,600	67,400
Maple-beech	45,200	--	21,200	13,800	10,200
Elm-ash-cottonwood	96,000	--	31,400	59,700	4,900
All types	2,166,800	2,600	1,146,700	912,600	104,900

Table 6.--*Area of commercial-forest land by forest type and stand-age class*
Pennyroyal Unit, Kentucky, 1963

(In acres by age in years)

Forest type	All ages	Less than 9	10-19	20-29	30-39	40-49	50-59	60-79	80-99	100 or more
Southern pine	58,200	--	3,800	11,000	9,500	28,700	200	500	4,400	100
Redcedar-hardwoods	190,300	13,100	41,500	39,200	32,000	17,800	24,100	22,600	--	--
Oak-pine	48,000	--	2,800	13,800	11,600	10,400	3,000	5,400	800	200
White oak	66,200	--	--	21,700	13,100	7,500	12,700	4,600	100	6,500
Oak-hickory	879,500	15,000	36,500	96,100	151,300	182,100	160,500	105,400	81,500	51,100
Central mixed hardwoods	783,400	24,000	106,400	179,100	172,400	92,300	77,600	77,800	29,500	24,300
Maple-beech	45,200	--	--	4,200	13,900	5,600	5,700	11,800	--	4,000
Elm-ash-cottonwood	96,000	4,700	13,400	15,200	30,600	19,300	8,500	--	4,300	--
All types	2,166,800	56,800	204,400	380,300	434,400	363,700	292,300	228,100	120,600	86,200

Table 7.--*Area of commercial-forest land by forest type and area-condition class*
Pennyroyal Unit, Kentucky, 1963

(In acres)

Forest type	All area conditions	Desirable	Moderate and favorable	Moderate and unfavorable	Poor but favorable	Poor and unfavorable
Southern pine	58,200	100	10,900	700	12,200	34,300
Redcedar-hardwoods	190,300	4,400	45,100	13,600	18,500	108,700
Oak-pine	48,000	600	9,200	12,300	1,400	24,500
White oak	66,200	3,300	20,500	300	17,200	24,900
Oak-hickory	879,500	10,000	121,200	134,100	75,800	538,400
Central mixed hardwoods	783,400	15,100	80,900	114,500	110,600	462,300
Maple-beech	45,200	--	--	--	2,700	42,500
Elm-ash-cottonwood	96,000	--	17,100	7,800	17,300	53,800
All types	2,166,800	33,500	304,900	283,300	255,700	1,289,400

Table 8.--*Number of growing-stock trees on commercial-forest land by diameter class and species group*
Pennyroyal Unit, Kentucky, 1963

(In thousand trees)

D.b.h. class (inches)	All species	Softwoods	Hardwoods
2	347,600	38,970	308,630
4	141,400	17,900	123,500
6	68,700	8,110	60,590
8	41,640	4,060	37,580
10	26,340	2,180	24,160
12	16,420	910	15,510
14	9,130	440	8,690
16	4,860	160	4,700
18	2,290	70	2,220
20	980	10	970
22	630	--	630
24+	620	--	620
All diameter classes	660,610	72,810	587,800

Table 9.--*Volume of growing stock and sawtimber on commercial-forest land by ownership and species group*
Pennyroyal Unit, Kentucky, 1963

Ownership class	Growing stock			Sawtimber		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
National forest	26,390	8,490	17,900	67,200	24,570	42,630
Other public	138,900	67,180	71,720	304,640	8,110	296,530
Forest industry	19,170	840	18,330	72,360	2,610	69,750
Farmer and miscellaneous private	1,048,110	2,140	1,045,970	3,735,240	205,850	3,529,390
All ownerships	1,232,570	78,650	1,153,920	4,179,440	241,140	3,938,300

* International 1/4-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963

ALL COUNTIES

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	14,160	4,880	9,280	40,890	31,640	9,250
Other yellow pines	42,510	12,830	29,680	175,410	120,320	55,090
Hemlock	20	--	20	60	60	--
Redcedar	21,960	15,230	6,730	24,780	8,560	16,220
Total softwoods	78,650	32,940	45,710	241,140	160,580	80,560
Hardwoods:						
Select white oak	188,910	76,750	112,160	651,590	474,860	176,730
Select red oak	58,240	14,880	43,360	265,860	208,780	57,080
Other white oak	92,870	38,950	53,920	303,050	231,070	71,980
Other red oak	178,810	65,940	112,870	665,500	503,130	162,370
Hickories	192,070	95,870	96,200	551,070	412,110	138,960
Hard maple	51,530	26,260	25,270	146,040	132,460	13,580
Beech	63,920	12,380	51,540	310,880	259,080	51,800
Black walnut	19,050	9,450	9,600	48,840	36,780	12,060
Ash	47,090	23,050	24,040	129,300	111,140	18,160
Soft maple	21,270	12,000	9,270	52,140	40,120	12,020
Sweetgum	11,650	4,790	6,860	39,040	31,620	7,420
Blackgum	30,580	13,270	17,310	104,290	82,700	21,590
Cottonwood	1,980	--	1,980	12,520	12,520	--
Yellow-poplar	108,720	37,280	71,440	433,460	315,690	117,770
Basswood	2,150	450	1,700	9,030	9,030	--
Other	85,080	46,200	38,880	215,690	167,320	48,370
Total hardwoods	1,153,920	477,520	676,400	3,938,300	3,028,410	909,890
All species	1,232,570	510,460	722,110	4,179,440	3,188,990	990,450

ADAIR COUNTY

Softwoods:						
Shortleaf pine	350	210	140	840	430	410
Other yellow pines	1,620	670	950	5,720	2,640	3,080
Hemlock	--	--	--	--	--	--
Redcedar	940	610	330	1,210	460	750
Total softwoods	2,910	1,490	1,420	7,770	3,530	4,240
Hardwoods:						
Select white oak	7,290	3,330	3,960	23,230	13,390	9,840
Select red oak	2,480	730	1,750	10,670	7,490	3,180
Other white oak	3,800	1,670	2,130	12,210	8,100	4,110
Other red oak	7,600	3,210	4,390	25,900	15,750	10,150
Hickories	8,460	4,600	3,860	22,480	14,100	8,380
Hard maple	2,120	1,040	1,080	6,150	5,320	830
Beech	2,500	560	1,940	11,750	8,750	3,000
Black walnut	910	530	380	1,990	1,220	770
Ash	1,820	980	840	4,610	3,810	800
Soft maple	1,000	570	430	2,500	1,310	1,190
Sweetgum	640	340	300	1,700	1,240	460
Blackgum	1,220	590	630	3,970	2,360	1,610
Cottonwood	130	--	130	730	730	--
Yellow-poplar	5,020	1,680	3,340	20,340	12,230	8,110
Basswood	100	30	70	370	370	--
Other	4,030	2,450	1,580	9,040	6,190	2,850
Total hardwoods	49,120	22,310	26,810	157,640	102,360	55,280
All species	52,030	23,800	28,230	165,410	105,890	59,520

* International 1/4-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963--Continued

BRECKENRIDGE COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	310	120	190	1,130	770	360
Other yellow pines	2,180	540	1,640	9,900	5,440	4,460
Hemlock	--	--	--	--	--	--
Redcedar	1,580	1,090	490	1,860	580	1,280
Total softwoods	4,070	1,750	2,320	12,890	6,790	6,100
Hardwoods:						
Select white oak	14,520	5,740	8,780	51,430	39,420	12,010
Select red oak	4,480	1,090	3,390	20,890	16,780	4,110
Other white oak	6,820	2,860	3,960	22,620	17,870	4,750
Other red oak	13,280	4,570	8,710	51,830	41,340	10,490
Hickories	14,210	6,780	7,430	42,840	34,200	8,640
Hard maple	4,030	2,010	2,020	11,730	10,690	1,040
Beech	5,290	940	4,350	26,260	23,160	3,100
Black walnut	1,470	700	770	3,940	3,240	700
Ash	3,670	1,730	1,940	10,340	8,900	1,440
Soft maple	1,510	830	680	3,900	3,490	410
Sweetgum	690	230	460	2,660	2,390	270
Blackgum	2,400	980	1,420	8,530	7,240	1,290
Cottonwood	160	--	160	1,090	1,090	--
Yellow-poplar	7,540	2,710	4,830	29,350	22,430	6,920
Basswood	160	30	130	710	710	--
Other	6,360	3,320	3,040	17,090	13,910	3,180
Total hardwoods	86,590	34,520	52,070	305,210	246,860	58,350
All species	90,660	36,270	54,390	318,100	253,650	64,450

BULLITT COUNTY

Softwoods:						
Shortleaf pine	350	200	150	840	610	230
Other yellow pines	2,030	510	1,520	9,200	5,540	3,660
Hemlock	--	--	--	--	--	--
Redcedar	940	660	280	1,020	460	560
Total softwoods	3,320	1,370	1,950	11,060	6,610	4,450
Hardwoods:						
Select white oak	10,290	4,210	6,080	35,820	26,440	9,380
Select red oak	3,260	860	2,400	14,730	11,860	2,870
Other white oak	5,250	2,230	3,020	17,250	13,340	3,910
Other red oak	9,740	3,550	6,190	36,860	28,050	8,810
Hickories	10,420	5,160	5,260	30,110	22,550	7,560
Hard maple	2,610	1,320	1,290	7,450	6,900	550
Beech	3,360	650	2,710	16,460	13,880	2,580
Black walnut	1,020	470	550	2,790	2,070	720
Ash	2,390	1,150	1,240	6,820	6,100	720
Soft maple	1,280	730	550	3,140	2,440	700
Sweetgum	670	270	400	2,300	1,800	500
Blackgum	1,610	640	970	5,730	4,640	1,090
Cottonwood	190	--	190	1,160	1,160	--
Yellow-poplar	5,610	2,040	3,570	21,820	15,420	6,400
Basswood	130	30	100	520	520	--
Other	4,460	2,420	2,040	11,420	8,980	2,440
Total hardwoods	62,290	25,730	36,560	214,380	166,150	48,230
All species	65,610	27,100	38,510	225,440	172,760	52,680

* International 1/4-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963 -- Continued

CASEY COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	420	200	220	1,330	950	380
Other yellow pines	1,900	490	1,410	8,440	3,890	4,550
Hemlock	--	--	--	--	--	--
Redcedar	1,510	1,030	480	1,780	670	1,110
Total softwoods	3,830	1,720	2,110	11,550	5,510	6,040
Hardwoods:						
Select white oak	15,740	6,350	9,390	55,240	42,030	13,210
Select red oak	4,870	1,220	3,650	22,450	18,200	4,250
Other white oak	7,810	3,300	4,510	25,700	20,250	5,450
Other red oak	14,320	5,170	9,150	54,460	42,280	12,180
Hickories	15,340	7,600	7,740	44,710	34,400	10,310
Hard maple	4,080	2,040	2,040	11,760	10,940	820
Beech	5,210	950	4,260	25,830	21,970	3,860
Black walnut	1,510	700	810	4,130	3,230	900
Ash	3,740	1,790	1,950	10,680	9,630	1,050
Soft maple	1,670	990	680	3,790	3,110	680
Sweetgum	880	360	520	2,950	2,350	600
Blackgum	2,690	1,070	1,620	9,600	8,130	1,470
Cottonwood	100	--	100	600	600	--
Yellow-poplar	8,180	3,080	5,100	31,070	22,810	8,260
Basswood	190	50	140	750	750	--
Other	6,610	3,610	3,000	16,970	13,430	3,540
Total hardwoods	92,940	38,280	54,660	320,690	254,110	66,580
All species	96,770	40,000	56,770	332,240	259,620	72,620

CLINTON COUNTY

Softwoods:						
Shortleaf pine	140	60	80	490	330	160
Other yellow pines	1,140	330	810	4,930	3,260	1,670
Hemlock	--	--	--	--	--	--
Redcedar	660	450	210	750	310	440
Total softwoods	1,940	840	1,100	6,170	3,900	2,270
Hardwoods:						
Select white oak	5,990	2,360	3,630	21,340	16,160	5,180
Select red oak	1,990	510	1,480	99,060	7,450	1,610
Other white oak	2,970	1,200	1,770	10,080	7,930	2,150
Other red oak	5,720	2,090	3,630	21,530	16,600	4,930
Hickories	6,290	3,130	3,160	18,360	13,880	4,480
Hard maple	1,530	770	760	4,460	4,150	310
Beech	1,990	420	1,570	9,420	7,840	1,580
Black walnut	590	280	310	1,590	1,240	350
Ash	1,600	800	800	4,250	3,710	540
Soft maple	720	360	360	1,950	1,260	690
Sweetgum	390	150	240	1,390	1,230	160
Blackgum	1,040	400	640	3,740	3,150	590
Cottonwood	40	--	40	240	240	--
Yellow-poplar	3,240	1,140	2,100	12,870	9,740	3,130
Basswood	70	20	50	270	270	--
Other	2,790	1,440	1,350	7,400	5,850	1,550
Total hardwoods	36,960	15,070	21,890	127,950	100,700	27,250
All species	38,900	15,910	22,990	134,120	104,600	29,520

*International 1/4-inch rule.

Table 10.--*Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963--Continued

CUMBERLAND COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	490	260	230	1,340	560	780
Other yellow pines	1,490	560	930	5,540	2,290	3,250
Hemlock	--	--	--	--	--	--
Redcedar	1,200	830	370	1,330	480	850
Total softwoods	3,180	1,650	1,530	8,210	3,330	4,880
Hardwoods:						
Select white oak	9,880	4,180	5,700	33,320	22,610	10,710
Select red oak	2,970	750	2,220	13,610	10,480	3,130
Other white oak	4,840	2,040	2,800	16,070	11,580	4,490
Other red oak	9,590	3,620	5,970	35,480	24,960	10,520
Hickories	10,520	5,330	5,190	30,060	22,020	8,040
Hard maple	2,650	1,290	1,360	7,790	7,000	790
Beech	3,670	720	2,950	17,790	14,790	3,000
Black walnut	1,130	590	540	2,720	1,920	800
Ash	2,350	1,200	1,150	6,260	5,480	780
Soft maple	1,130	680	450	2,590	1,870	720
Sweetgum	720	340	380	2,150	1,590	560
Blackgum	1,590	730	860	5,280	3,700	1,580
Cottonwood	60	--	60	360	360	--
Yellow-poplar	5,700	2,100	3,600	21,840	14,350	7,490
Basswood	120	30	90	520	520	--
Other	4,310	2,450	1,860	10,460	8,050	2,410
Total hardwoods	61,230	26,050	35,180	206,300	151,280	55,020
All species	64,410	27,700	36,710	214,510	154,610	59,900

GRAYSON COUNTY

Softwoods:						
Shortleaf pine	300	130	170	1,040	560	480
Other yellow pines	2,010	810	1,200	7,340	4,760	2,580
Hemlock	--	--	--	--	--	--
Redcedar	1,300	890	410	1,510	360	1,150
Total softwoods	3,610	1,830	1,780	9,890	5,680	4,210
Hardwoods:						
Select white oak	9,670	3,910	5,760	33,670	24,280	9,390
Select red oak	2,880	730	2,150	13,220	10,430	2,790
Other white oak	4,430	1,820	2,610	14,860	11,440	3,420
Other red oak	8,960	3,300	5,660	33,540	24,840	8,700
Hickories	9,450	4,790	4,660	27,070	19,940	7,130
Hard maple	2,650	1,310	1,340	7,840	6,930	910
Beech	3,190	630	2,560	15,420	12,830	2,590
Black walnut	990	510	480	2,440	1,840	600
Ash	2,570	1,300	1,270	6,790	5,780	1,010
Soft maple	920	540	380	2,240	1,750	490
Sweetgum	480	170	310	1,820	1,610	210
Blackgum	1,580	690	890	5,470	4,200	1,270
Cottonwood	20	--	20	120	120	--
Yellow-poplar	5,450	1,770	3,680	22,340	16,700	5,640
Basswood	100	20	80	430	430	--
Other	4,580	2,450	2,130	11,910	9,280	2,630
Total hardwoods	57,920	23,940	33,980	199,180	152,400	46,780
All species	61,530	25,770	35,760	209,070	158,080	50,990

* International 1/4-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963-- Continued

GREEN COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	160	70	90	530	300	230
Other yellow pines	650	160	490	2,880	1,670	1,210
Hemlock	--	--	--	--	--	--
Redcedar	660	440	220	830	230	600
Total softwoods	1,470	670	800	4,240	2,200	2,040
Hardwoods:						
Select white oak	5,290	2,030	3,260	19,070	14,360	4,710
Select red oak	1,530	380	1,150	7,060	5,700	1,360
Other white oak	2,350	930	1,420	8,170	6,380	1,790
Other red oak	4,830	1,680	3,150	18,720	14,520	4,200
Hickories	5,350	2,620	2,730	15,870	12,190	3,680
Hard maple	1,480	730	750	4,400	3,970	430
Beech	1,780	340	1,440	8,560	7,000	1,560
Black walnut	520	270	250	1,290	1,000	290
Ash	1,350	660	690	3,660	3,170	490
Soft maple	540	300	240	1,330	1,080	250
Sweetgum	290	110	180	1,090	850	240
Blackgum	870	380	490	3,020	2,350	670
Cottonwood	20	--	20	120	120	--
Yellow-poplar	2,720	1,000	1,720	10,440	7,560	2,880
Basswood	60	10	50	270	270	--
Other	2,430	1,230	1,200	6,600	5,140	1,460
Total hardwoods	31,410	12,670	18,740	109,670	85,660	24,010
All species	32,880	13,340	19,540	113,910	87,860	26,050

HANCOCK COUNTY

Softwoods:						
Shortleaf pine	150	80	70	400	250	150
Other yellow pines	560	190	370	2,220	1,190	1,030
Hemlock	--	--	--	--	--	--
Redcedar	490	350	140	500	210	290
Total softwoods	1,200	620	580	3,120	1,650	1,470
Hardwoods:						
Select white oak	4,340	1,810	2,530	14,870	9,970	4,900
Select red oak	1,320	360	960	5,870	4,480	1,390
Other white oak	2,030	820	1,210	6,980	5,100	1,880
Other red oak	4,130	1,600	2,530	14,890	10,290	4,600
Hickories	4,600	2,360	2,240	13,080	9,430	3,650
Hard maple	1,270	650	620	3,560	3,090	470
Beech	1,510	310	1,200	7,190	5,680	1,510
Black walnut	560	270	290	1,520	1,220	300
Ash	1,160	530	630	3,510	3,140	370
Soft maple	720	270	450	2,650	2,150	500
Sweetgum	410	160	250	1,450	1,240	210
Blackgum	680	320	360	2,190	1,600	590
Cottonwood	320	--	320	2,190	2,190	--
Yellow-poplar	2,590	920	1,670	10,070	6,940	3,130
Basswood	50	--	50	280	280	--
Other	2,630	1,400	1,230	6,700	5,520	1,180
Total hardwoods	28,320	11,780	16,540	97,000	72,320	24,680
All species	29,520	12,400	17,120	100,120	73,970	26,150

* International 1/4-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963--Continued

HARDIN COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	470	240	230	1,350	780	570
Other yellow pines	2,190	710	1,480	9,000	5,470	3,530
Hemlock	--	--	--	--	--	--
Redcedar	1,500	1,060	440	1,590	600	990
Total softwoods	4,160	2,010	2,150	11,940	6,850	5,090
Hardwoods:						
Select white oak	12,810	5,220	7,590	44,470	32,380	12,090
Select red oak	4,030	1,020	3,010	18,460	14,550	3,910
Other white oak	6,220	2,610	3,610	20,510	15,690	4,820
Other red oak	12,140	4,560	7,580	44,950	33,940	11,010
Hickories	12,950	6,460	6,490	37,670	28,100	9,570
Hard maple	3,840	1,980	1,860	10,770	9,740	1,030
Beech	4,510	900	3,610	21,610	18,120	3,490
Black walnut	1,310	660	650	3,310	2,440	870
Ash	3,240	1,600	1,640	8,970	7,880	1,090
Soft maple	1,490	830	660	3,750	2,800	950
Sweetgum	810	350	460	2,590	1,990	600
Blackgum	2,170	950	1,220	7,320	5,820	1,500
Cottonwood	140	--	140	920	920	--
Yellow-poplar	7,620	2,490	5,130	31,270	22,620	8,650
Basswood	160	20	140	680	680	--
Other	5,990	3,330	2,660	14,930	11,470	3,460
Total hardwoods	79,430	32,980	46,450	272,180	209,140	63,040
All species	83,590	34,990	48,600	284,120	215,990	68,130

HART COUNTY

Softwoods:						
Shortleaf pine	240	120	120	740	580	160
Other yellow pines	1,590	390	1,200	7,250	4,060	3,190
Hemlock	--	--	--	--	--	--
Redcedar	1,100	740	360	1,390	480	910
Total softwoods	2,930	1,250	1,680	9,380	5,120	4,260
Hardwoods:						
Select white oak	10,080	4,030	6,050	35,480	26,370	9,110
Select red oak	3,160	800	2,360	14,580	11,540	3,040
Other white oak	4,980	2,100	2,880	16,350	12,620	3,730
Other red oak	9,310	3,370	5,940	35,190	26,900	8,290
Hickories	10,500	5,280	5,220	30,120	21,640	8,480
Hard maple	2,740	1,400	1,340	7,740	7,050	690
Beech	3,530	620	2,910	17,780	14,980	2,800
Black walnut	1,040	500	540	2,750	2,170	580
Ash	2,500	1,160	1,340	7,300	6,470	830
Soft maple	1,160	610	550	3,170	2,760	410
Sweetgum	500	130	370	2,130	1,820	310
Blackgum	1,700	720	980	5,990	4,800	1,190
Cottonwood	220	--	220	1,490	1,490	--
Yellow-poplar	5,400	1,920	3,480	21,260	15,240	6,020
Basswood	110	30	80	460	460	--
Other	4,690	2,480	2,210	12,390	9,940	2,450
Total hardwoods	61,620	25,150	36,470	214,180	166,250	47,930
All species	64,550	26,400	38,150	223,560	171,370	52,190

* International 1/4-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963--Continued

LARUE COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	120	50	70	420	300	120
Other yellow pines	860	160	700	4,270	2,770	1,500
Hemlock	--	--	--	--	--	--
Redcedar	530	370	160	560	190	370
Total softwoods	1,510	580	230	5,250	3,260	1,990
Hardwoods:						
Select white oak	5,490	2,160	3,330	19,570	14,830	4,740
Select red oak	1,680	400	1,280	7,930	6,400	1,530
Other white oak	2,670	1,070	1,600	9,170	7,310	1,860
Other red oak	5,010	1,730	3,280	19,550	15,300	4,250
Hickories	5,360	2,590	2,770	16,000	12,610	3,390
Hard maple	1,440	740	700	4,100	3,750	350
Beech	1,780	340	1,440	8,620	7,390	1,230
Black walnut	520	250	270	1,370	1,090	280
Ash	1,410	650	760	3,980	3,370	610
Soft maple	550	320	230	1,230	1,090	140
Sweetgum	280	90	190	1,050	890	160
Blackgum	900	380	520	3,070	2,550	520
Cottonwood	20	--	20	120	120	--
Yellow-poplar	2,680	980	1,700	10,360	7,940	2,420
Basswood	70	20	50	270	270	--
Other	2,300	1,160	1,140	6,310	5,120	1,190
Total hardwoods	32,160	12,880	19,280	112,700	90,030	22,670
All species	33,670	13,460	20,210	117,950	93,290	24,660

MARION COUNTY

Softwoods:						
Shortleaf pine	260	140	120	740	480	260
Other yellow pines	1,090	400	690	4,130	1,730	2,400
Hemlock	--	--	--	--	--	--
Redcedar	960	690	270	990	300	690
Total softwoods	2,310	1,230	1,080	5,860	2,510	3,350
Hardwoods:						
Select white oak	6,520	2,830	3,690	21,570	14,620	6,950
Select red oak	2,010	540	1,470	8,990	6,770	2,220
Other white oak	3,440	1,520	1,920	11,010	8,040	2,970
Other red oak	6,210	2,440	3,770	22,340	16,110	6,230
Hickories	7,320	3,840	3,480	20,040	13,630	6,410
Hard maple	1,940	1,040	900	5,230	4,590	640
Beech	2,110	440	1,670	10,120	8,270	1,850
Black walnut	790	410	380	1,910	1,370	540
Ash	1,640	790	850	4,720	3,970	750
Soft maple	740	440	300	1,660	1,210	450
Sweetgum	650	340	310	1,750	1,310	440
Blackgum	900	420	480	2,960	2,090	870
Cottonwood	60	--	60	360	360	--
Yellow-poplar	4,030	1,450	2,580	15,580	10,260	5,320
Basswood	70	10	60	300	300	--
Other	3,230	1,870	1,360	7,480	5,390	2,090
Total hardwoods	41,660	18,380	23,280	136,020	98,290	37,730
All species	43,970	19,610	24,360	141,880	100,800	41,080

* International 1/4-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963-- Continued

MEADE COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	290	150	140	850	450	400
Other yellow pines	2,270	490	1,780	10,690	8,810	1,880
Hemlock	--	--	--	--	--	--
Redcedar	930	690	240	870	250	620
Total softwoods	3,490	1,330	2,160	12,410	9,510	2,900
Hardwoods:						
Select white oak	6,920	2,940	3,980	23,260	16,400	6,860
Select red oak	2,110	550	1,560	9,550	7,220	2,330
Other white oak	3,550	1,550	2,000	11,320	8,340	2,980
Other red oak	6,490	2,570	3,920	23,300	17,130	6,170
Hickories	7,140	3,670	3,470	20,020	14,340	5,680
Hard maple	1,860	970	890	5,170	4,670	500
Beech	2,220	470	1,750	10,540	8,530	2,010
Black walnut	660	320	340	1,740	1,250	490
Ash	1,630	820	810	4,450	3,700	750
Soft maple	780	410	370	2,140	1,520	620
Sweetgum	480	220	260	1,430	990	440
Blackgum	1,150	520	630	3,740	2,960	780
Cottonwood	110	--	110	660	660	--
Yellow-poplar	4,150	1,320	2,830	17,300	12,410	4,890
Basswood	80	20	60	310	310	--
Other	3,190	1,780	1,410	7,890	5,880	2,010
Total hardwoods	42,520	18,130	24,390	142,820	106,310	36,510
All species	46,010	19,460	26,550	155,230	115,820	39,410

METCALFE COUNTY

Softwoods:						
Shortleaf pine	280	150	130	760	470	290
Other yellow pines	1,450	520	930	5,620	3,620	2,000
Hemlock	--	--	--	--	--	--
Redcedar	920	630	290	1,050	370	680
Total softwoods	2,650	1,300	1,350	7,430	4,460	2,970
Hardwoods:						
Select white oak	8,420	3,420	5,000	29,380	21,990	7,390
Select red oak	2,590	630	1,960	12,010	9,800	2,210
Other white oak	4,140	1,700	2,440	13,870	10,590	3,280
Other red oak	7,790	2,840	4,950	29,410	22,640	6,770
Hickories	8,130	4,080	4,050	23,390	17,720	5,670
Hard maple	2,180	1,180	1,000	5,780	5,250	530
Beech	2,690	570	2,120	12,760	10,060	2,700
Black walnut	780	360	420	2,140	1,630	510
Ash	2,090	1,050	1,040	5,610	5,000	610
Soft maple	850	490	360	1,980	1,460	520
Sweetgum	480	170	310	1,790	1,470	320
Blackgum	1,380	580	800	4,800	3,970	830
Cottonwood	20	--	20	120	120	--
Yellow-poplar	4,410	1,580	2,830	17,300	12,430	4,870
Basswood	90	10	80	390	390	--
Other	3,530	1,890	1,640	9,160	6,960	2,200
Total hardwoods	49,570	20,550	29,020	169,890	131,480	38,410
All species	52,220	21,850	30,370	177,320	135,940	41,380

* International 1/4-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963-- Continued

NELSON COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	380	210	170	950	490	460
Other yellow pines	2,730	720	2,010	12,280	10,300	1,980
Hemlock	--	--	--	--	--	--
Redcedar	1,310	920	390	1,440	450	990
Total softwoods	4,420	1,850	2,570	14,670	11,240	3,430
Hardwoods:						
Select white oak	9,820	3,800	6,020	35,070	25,200	9,870
Select red oak	2,980	730	2,250	13,810	10,460	3,350
Other white oak	4,590	1,900	2,690	15,250	11,280	3,970
Other red oak	8,810	3,130	5,680	33,780	25,560	8,220
Hickories	9,780	4,730	5,050	29,130	22,430	6,700
Hard maple	2,820	1,450	1,370	8,040	7,260	780
Beech	3,510	670	2,840	17,040	14,060	2,980
Black walnut	990	470	520	2,650	2,050	600
Ash	2,700	1,310	1,390	7,170	5,660	1,510
Soft maple	1,160	660	500	2,770	1,980	790
Sweetgum	570	220	350	1,980	1,720	260
Blackgum	1,590	740	850	5,020	4,050	970
Cottonwood	40	--	40	240	240	--
Yellow-poplar	6,180	2,010	4,170	25,750	19,330	6,420
Basswood	120	20	100	520	520	--
Other	4,500	2,410	2,090	11,430	8,730	2,700
Total hardwoods	60,160	24,250	35,910	209,650	160,530	49,120
All species	64,580	26,100	38,480	224,320	171,770	52,550

PULASKI COUNTY

Softwoods:						
Shortleaf pine	7,980	1,650	6,330	23,790	21,580	2,210
Other yellow pines	9,030	2,900	6,130	33,190	27,520	5,670
Hemlock	--	--	--	--	--	--
Redcedar	1,990	1,380	610	2,290	870	1,420
Total softwoods	19,000	5,930	13,070	59,270	49,970	9,300
Hardwoods:						
Select white oak	19,650	7,680	11,970	64,590	50,750	13,840
Select red oak	5,650	1,410	4,240	25,570	20,490	5,080
Other white oak	10,030	4,130	5,900	29,360	24,030	5,330
Other red oak	20,000	7,110	12,890	72,100	60,420	11,680
Hickories	18,750	8,730	10,020	52,880	42,620	10,260
Hard maple	4,970	2,510	2,460	13,810	12,900	910
Beech	6,140	1,020	5,120	30,960	27,350	3,610
Black walnut	1,630	770	860	4,240	3,230	1,010
Ash	4,450	2,110	2,340	12,310	10,480	1,830
Soft maple	2,060	1,200	860	4,460	3,760	700
Sweetgum	960	340	620	3,340	2,870	470
Blackgum	2,840	1,190	1,650	9,840	8,230	1,610
Cottonwood	140	--	140	920	920	--
Yellow-poplar	12,400	3,800	8,600	50,700	41,590	9,110
Basswood	190	40	150	780	780	--
Other	7,250	3,770	3,480	18,440	15,180	3,260
Total hardwoods	117,110	45,810	71,300	394,300	325,600	68,700
All species	136,110	51,740	84,370	453,570	375,570	78,000

* International 1/4-inch rule.

Table 10.-- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963-- Continued

RUSSELL COUNTY

Species	Growing stock			Sawtimber		
	Total	Pole timber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	240	140	100	570	350	220
Other yellow pines	900	320	580	3,410	1,580	1,830
Hemlock	--	--	--	--	--	--
Redcedar	760	540	220	790	270	520
Total softwoods	1,900	1,000	900	4,770	2,200	2,570
Hardwoods:						
Select white oak	6,120	2,720	3,400	19,920	12,960	6,960
Select red oak	1,920	540	1,380	8,400	6,000	2,400
Other white oak	3,080	1,320	1,760	10,100	7,060	3,040
Other red oak	5,850	2,420	3,430	20,330	13,600	6,730
Hickories	6,520	3,550	2,970	17,240	11,330	5,910
Hard maple	1,540	810	730	4,170	3,570	600
Beech	1,710	430	1,280	7,710	5,490	2,220
Black walnut	620	340	280	1,400	920	480
Ash	1,360	720	640	3,530	3,050	480
Soft maple	630	390	240	1,380	1,060	320
Sweetgum	460	230	230	1,300	830	470
Blackgum	970	450	520	3,180	2,350	830
Cottonwood	90	--	90	480	480	--
Yellow-poplar	3,320	1,240	2,080	12,610	7,720	4,890
Basswood	70	20	50	260	260	--
Other	2,870	1,720	1,150	6,530	4,450	2,080
Total hardwoods	37,130	16,900	20,230	118,540	81,130	37,410
All species	39,030	17,900	21,130	123,310	83,330	39,980

TAYLOR COUNTY

Softwoods:						
Shortleaf pine	190	80	110	610	380	230
Other yellow pines	970	250	720	4,410	2,530	1,880
Hemlock	--	--	--	--	--	--
Redcedar	740	490	250	910	380	530
Total softwoods	1,900	820	1,080	5,930	3,290	2,640
Hardwoods:						
Select white oak	6,700	2,560	4,140	24,250	18,510	5,740
Select red oak	2,060	530	1,530	9,430	7,760	1,670
Other white oak	3,230	1,280	1,950	11,150	8,840	2,310
Other red oak	6,160	2,160	4,000	23,830	18,600	5,230
Hickories	6,730	3,270	3,460	19,890	15,490	4,400
Hard maple	1,770	870	900	5,240	4,740	500
Beech	2,230	430	1,800	10,960	9,150	1,810
Black walnut	650	310	340	1,740	1,370	370
Ash	1,620	750	870	4,690	4,170	520
Soft maple	730	400	330	1,810	1,490	320
Sweetgum	410	160	250	1,440	1,190	250
Blackgum	1,160	500	660	3,970	3,360	610
Cottonwood	40	--	40	240	240	--
Yellow-poplar	3,530	1,290	2,240	13,630	9,770	3,860
Basswood	80	20	60	340	340	--
Other	2,960	1,550	1,410	7,690	6,060	1,630
Total hardwoods	40,060	16,080	23,980	140,300	111,080	29,220
All species	41,960	16,900	25,060	146,230	114,370	31,860

* International 1/4-inch rule.

Table 10.--*Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963 -- Continued

WAYNE COUNTY

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	1,040	620	420	2,170	1,020	1,150
Other yellow pines	5,850	1,710	4,140	24,990	21,250	3,740
Hemlock	20	--	20	60	60	--
Redcedar	1,940	1,370	570	2,110	640	1,470
Total softwoods	8,850	3,700	5,150	29,330	22,970	6,360
Hardwoods:						
Select white oak	13,370	5,470	7,900	46,040	32,290	13,850
Select red oak	4,270	1,100	3,170	19,570	14,920	4,650
Other white oak	6,640	2,900	3,740	21,020	15,280	5,740
Other red oak	12,870	4,820	8,050	47,510	34,300	13,210
Hickories	14,250	7,300	6,950	40,110	29,490	10,620
Hard maple	4,010	2,150	1,860	10,850	9,950	900
Beech	4,990	970	4,020	24,100	19,780	4,320
Black walnut	1,360	740	620	3,180	2,280	900
Ash	3,800	1,950	1,850	9,650	7,670	1,980
Soft maple	1,630	980	650	3,700	2,530	1,170
Sweetgum	880	410	470	2,730	2,240	490
Blackgum	2,140	1,020	1,120	6,870	5,150	1,720
Cottonwood	60	--	60	360	360	--
Yellow-poplar	8,950	2,760	6,190	37,560	28,200	9,360
Basswood	130	20	110	600	600	--
Other	6,370	3,470	2,900	15,850	11,790	4,060
Total hardwoods	85,720	36,060	49,660	289,700	216,730	72,970
All species	94,570	39,760	54,810	319,030	239,700	79,330

* International 1/4-inch rule.

Table 11.--*Volume of growing-stock trees on commercial-forest land by species and diameter class*
Pennyroyal Unit, Kentucky, 1963

(In thousand cubic feet by diameter in inches)

Species	Total	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0 and larger
Softwoods:											
Shortleaf pine	14,160	1,990	2,540	2,980	2,500	2,250	1,080	650	170	--	--
Other yellow pines	42,510	5,410	7,780	9,920	7,670	6,750	2,920	2,060	--	--	--
Hemlock	20	--	--	--	--	--	--	--	10	--	10
Redcedar	21,960	7,290	7,930	4,530	1,430	250	340	--	190	--	--
Total softwoods	78,650	14,690	18,250	17,430	11,600	9,250	4,340	2,710	370	--	10
Hardwoods:											
Select white oak	188,910	16,570	25,900	34,510	37,830	30,500	18,920	11,220	6,220	2,840	4,400
Select red oak	58,240	4,460	5,010	5,360	8,560	8,450	7,470	7,330	1,810	5,050	4,740
Other white oak	92,870	7,350	15,570	16,310	15,880	17,520	9,840	5,590	1,140	2,290	1,380
Other red oak	178,810	10,770	21,860	32,460	29,000	26,150	22,810	10,920	6,990	6,110	11,740
Hickories	192,070	19,420	36,400	40,420	36,430	23,070	19,800	7,130	4,100	2,930	2,370
Hard maple	51,530	6,670	10,420	9,250	7,740	7,210	4,120	2,310	1,890	1,270	650
Beech	63,920	1,290	4,290	6,780	8,790	9,630	10,530	7,610	3,640	4,760	6,600
Black walnut	19,050	2,900	3,840	2,760	3,150	4,110	1,100	600	430	160	--
Ash	47,090	6,850	8,280	7,900	7,350	4,490	4,050	1,960	3,610	250	2,350
Soft maple	21,270	3,690	3,680	4,700	3,020	1,930	1,200	1,740	1,310	--	--
Sweetgum	11,650	620	1,570	2,590	2,380	1,310	1,050	1,320	810	--	--
Blackgum	30,580	3,370	4,390	5,430	5,240	3,880	2,200	890	1,830	1,950	1,400
Cottonwood	1,980	--	--	--	--	780	--	310	--	--	890
Yellow-poplar	108,720	7,200	12,170	17,740	20,380	14,520	13,970	11,700	5,070	2,320	3,650
Basswood	2,150	--	330	120	140	510	390	--	660	--	--
Other	85,080	15,420	17,650	13,250	12,970	8,800	5,400	3,830	3,020	2,930	1,810
Total hardwoods	1,153,920	106,580	171,360	199,580	198,860	162,860	122,850	74,460	42,530	32,860	41,980
All species	1,232,570	121,270	189,610	217,010	210,460	172,110	127,190	77,170	42,900	32,860	41,990

Table 12.--Volume of sawtimber on commercial-forest land by species and diameter class
Pennyroyal Unit, Kentucky, 1963

(In thousand board feet* by diameter in inches)

Species	Total	9.0-10.9†	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0 and larger
Softwoods:									
Shortleaf pine	40,890	13,030	10,870	9,060	3,840	3,540	550	--	--
Other yellow pines	175,410	55,840	45,610	41,430	19,050	13,480	--	--	--
Hemlock	60	--	--	10	10	10	10	10	10
Redcedar	24,780	14,520	6,040	1,230	1,680	--	1,310	--	--
Total softwoods	241,140	83,390	62,520	51,730	24,580	17,030	1,870	10	10
Hardwoods:									
Select white oak	651,590	--	208,330	179,160	111,690	67,430	38,130	18,220	28,630
Select red oak	265,860	--	47,050	50,130	44,650	44,590	12,120	33,540	33,780
Other white oak	303,050	--	86,880	95,460	56,230	32,330	7,110	15,750	9,290
Other red oak	665,500	--	161,910	146,660	129,800	66,550	45,430	36,790	78,360
Hickories	551,070	--	204,820	129,410	114,960	42,340	25,450	18,490	15,600
Hard maple	146,040	--	42,460	41,860	23,770	13,760	11,950	7,860	4,380
Beech	310,880	--	49,160	56,100	61,540	45,350	23,530	30,010	45,190
Black walnut	48,840	--	16,160	20,140	5,550	3,460	2,580	950	--
Ash	129,300	--	32,570	23,220	22,470	12,290	22,770	1,540	14,440
Soft maple	52,140	--	17,190	10,170	6,510	9,690	8,580	--	--
Sweetgum	39,040	--	13,230	6,810	5,630	7,960	5,410	--	--
Blackgum	104,290	--	27,340	21,270	17,160	5,550	11,130	12,240	9,600
Cottonwood	12,520	--	--	4,330	--	1,950	--	--	6,240
Yellow-poplar	433,460	--	114,240	85,160	87,750	74,880	32,400	15,470	23,560
Basswood	9,030	--	1,490	1,650	2,560	--	3,330	--	--
Other	215,690	--	65,380	50,550	28,570	21,380	18,830	18,910	12,070
Total hardwoods	3,938,300	--	1,088,210	922,080	718,840	449,510	268,750	209,770	281,140
All species	4,179,440	83,390	1,150,730	973,810	743,420	466,540	270,620	209,780	281,150

* International 1/4-inch rule.

† Softwoods only.

Table 13.--*Net annual growth on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963

Species	Growing stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Softwoods:						
Shortleaf pine	1,070	680	390	4,280	1,280	3,000
Other yellow pines	3,420	2,010	1,410	16,920	9,170	7,750
Hemlock	--	--	--	--	--	--
Redcedar	1,550	1,260	290	4,520	880	3,640
Total softwoods	6,040	3,950	2,090	25,720	11,330	14,390
Hardwoods:						
Select white oak	8,220	5,210	3,010	43,170	25,040	18,130
Select red oak	2,580	1,360	1,220	13,020	8,010	5,010
Other white oak	3,760	2,490	1,270	18,840	11,320	7,520
Other red oak	9,330	5,940	3,390	48,420	23,610	24,810
Hickories	8,110	5,940	2,170	34,770	21,620	13,150
Hard maple	2,610	1,960	650	9,840	7,620	2,220
Beech	1,870	790	1,080	12,250	9,580	2,670
Black walnut	860	530	330	3,900	1,890	2,010
Ash	2,350	1,770	580	8,960	4,770	4,190
Soft maple	1,730	1,430	300	6,180	3,100	3,080
Sweetgum	610	370	240	3,540	1,680	1,860
Blackgum	1,530	1,080	450	8,270	4,950	3,320
Cottonwood	90	--	90	520	520	--
Yellow-poplar	8,750	4,860	3,890	46,820	24,520	22,300
Basswood	140	90	50	720	720	--
Other	6,200	4,700	1,500	20,920	14,800	6,120
Total hardwoods	58,740	38,520	20,220	280,140	163,750	116,390
All species	64,780	42,470	22,310	305,860	175,080	130,780

* International 1/4-inch rule.

Table 14.--*Net annual growth on commercial-forest land by county and species group*
Pennyroyal Unit, Kentucky, 1963

County	Growing stock			Sawtimber		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
Adair	2,960	230	2,730	13,710	1,170	12,540
Breckenridge	4,580	280	4,300	22,170	1,310	20,860
Bullitt	3,390	230	3,160	16,590	1,160	15,430
Casey	4,950	260	4,690	24,030	1,220	22,810
Clinton	1,990	130	1,860	9,600	660	8,940
Cumberland	3,450	250	3,200	16,410	1,240	15,170
Grayson	3,410	390	3,020	15,430	1,330	14,100
Green	1,690	100	1,590	8,000	470	7,530
Hancock	1,560	90	1,470	7,510	410	7,100
Hardin	4,390	300	4,090	20,860	1,410	19,450
Hart	3,320	200	3,120	16,040	970	15,070
Larue	1,690	100	1,590	8,270	470	7,800
Marion	2,390	170	2,220	11,200	800	10,400
Meade	2,460	230	2,230	11,810	1,310	10,500
Metcalf	2,730	200	2,530	13,010	860	12,150
Nelson	3,370	310	3,060	16,290	1,540	14,750
Pulaski	6,870	1,470	5,400	30,280	4,910	25,370
Russell	2,160	150	2,010	10,050	680	9,370
Taylor	2,140	130	2,010	10,410	620	9,790
Wayne	5,280	820	4,460	24,190	3,180	21,010
Total	64,780	6,040	58,740	305,860	25,720	280,140

* International 1/4-inch rule.

Table 15.--*Timber cut from commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1962

Species	Growing stock			Sawtimber
	Total	Poletimber trees	Sawtimber trees	Total
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>
Softwoods:				
Shortleaf pine	670	370	300	1,570
Other yellow pines	330	70	260	1,290
Hemlock	--	--	--	10
Redcedar	630	380	250	1,280
Total softwoods	1,630	820	810	4,150
Hardwoods:				
Select white oak	3,210	820	2,390	14,570
Select red oak	6,440	1,880	4,560	28,010
Other white oak	1,880	740	1,140	6,740
Other red oak	3,940	1,460	2,480	14,810
Hickories	3,700	1,850	1,850	10,420
Hard maple	520	80	440	2,990
Beech	2,920	160	2,760	18,960
Black walnut	220	10	210	1,510
Ash	490	90	400	2,640
Soft maple	320	10	310	2,040
Sweetgum	210	--	210	1,340
Blackgum	220	10	210	1,410
Cottonwood	40	--	40	240
Yellow-poplar	2,490	60	2,430	16,650
Basswood	130	10	120	810
Other	1,040	190	850	5,540
Total hardwoods	27,770	7,370	20,400	128,680
All species	29,400	8,190	21,210	132,830

* International 1/4-inch rule.

Table 16.--*Timber cut from commercial-forest land by ownership and species group*
Pennyroyal Unit, Kentucky, 1962

Ownership class	Growing stock			Sawtimber		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand cu. ft.</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>	<i>Thousand bd. ft.*</i>
National forest	190	100	90	1,020	460	560
Other public	40	--	40	260	--	260
Forest industry	290	20	270	1,860	80	1,780
Farmer and miscellaneous private	28,880	1,510	27,370	129,690	3,610	126,080
All ownerships	29,400	1,630	27,770	132,830	4,150	128,680

* International 1/4-inch rule.

Table 17.--*Net annual desirable cut on commercial-forest land by species and kind of material*
Pennyroyal Unit, Kentucky, 1963

Species	Growing Stock			Sawtimber		
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	In other stands
	<i>Thousand</i> <i>cu. ft.</i>	<i>Thousand</i> <i>cu. ft.</i>	<i>Thousand</i> <i>cu. ft.</i>	<i>Thousand</i> <i>bd. ft.*</i>	<i>Thousand</i> <i>bd. ft.*</i>	<i>Thousand</i> <i>bd. ft.*</i>
Softwoods:						
Shortleaf pine	250	60	190	950	920	30
Other yellow pines	440	100	340	2,160	1,590	570
Hemlock	--	--	--	--	--	--
Redcedar	280	250	30	50	50	--
Total softwoods	970	410	560	3,160	2,560	600
Hardwoods:						
Select white oak	4,390	1,750	2,640	15,540	12,600	2,940
Select red oak	1,760	510	1,250	7,470	6,110	1,360
Other white oak	2,930	980	1,950	10,360	8,900	1,460
Other red oak	4,840	1,380	3,460	20,230	17,040	3,190
Hickories	5,580	2,610	2,970	17,260	12,330	4,930
Hard maple	1,540	820	720	4,250	4,070	180
Beech	1,970	390	1,580	9,370	7,830	1,540
Black walnut	450	180	270	1,420	850	570
Ash	1,530	660	870	5,160	4,850	310
Soft maple	510	290	220	1,290	740	550
Sweetgum	610	300	310	1,760	1,760	--
Blackgum	590	220	370	1,950	1,840	110
Cottonwood	--	--	--	--	--	--
Yellow-poplar	3,070	1,090	1,980	11,540	8,550	2,990
Basswood	50	30	20	150	150	--
Other	2,010	910	1,100	5,940	5,630	310
Total hardwoods	31,830	12,120	19,710	113,690	93,250	20,440
All species	32,800	12,530	20,270	116,850	95,810	21,040

* International 1/4-inch rule.

Table 18.--*Net annual desirable cut on commercial-forest land by county and species group*
Pennyroyal Unit, Kentucky, 1963

County	Growing stock			Sawtimber		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	<i>Thousand</i> <i>cu. ft.</i>	<i>Thousand</i> <i>cu. ft.</i>	<i>Thousand</i> <i>cu. ft.</i>	<i>Thousand</i> <i>bd. ft.*</i>	<i>Thousand</i> <i>bd. ft.*</i>	<i>Thousand</i> <i>bd. ft.*</i>
Adair	1,380	30	1,350	4,560	80	4,480
Breckenridge	2,420	40	2,380	8,880	140	8,740
Bullitt	1,770	40	1,730	6,270	110	6,160
Casey	2,610	40	2,570	9,310	120	9,190
Clinton	1,020	20	1,000	3,760	60	3,700
Cumberland	1,720	30	1,690	6,030	90	5,940
Grayson	1,640	40	1,600	5,820	100	5,720
Green	900	20	880	3,180	40	3,140
Hancock	790	10	780	2,830	30	2,800
Hardin	2,240	40	2,200	7,970	120	7,850
Hart	1,720	30	1,690	6,260	100	6,160
Larue	900	20	880	3,300	50	3,250
Marion	1,190	30	1,160	3,980	60	3,920
Meade	1,200	40	1,160	4,280	130	4,150
Metcalf	1,410	30	1,380	5,010	80	4,930
Nelson	1,710	50	1,660	6,200	150	6,050
Pulaski	3,550	330	3,220	13,070	1,270	11,800
Russell	1,060	20	1,040	3,410	50	3,360
Taylor	1,120	20	1,100	4,100	60	4,040
Wayne	2,450	90	2,360	8,630	320	8,310
Total	32,800	970	31,830	116,850	3,160	113,690

* International 1/4-inch rule.

THE AUTHORS



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